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ORIGINAL ARTICLES.

EXTIRPATION OF THE KIDNEY FOR AN ENORMOUS MYXO-SARCOMA IN A CHILD AGED THREE YEARS AND EIGHT MONTHS.

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AMONG the rare occurrences in operative surgery is the successful treatment of malignant renal diseases in children. This is shown by the alarming mortality in these cases of 44.9 per cent. due to the operation. The removal of tumors from the kidney in children is an operation of recent date; for it has only been a very short time since surgeons would not attempt operative interference. Fischer[1] tabulated twenty-five such cases, with a mortality of 48 per cent.

Czerney,[2] Schede and Roberts have also contributed to the cases on record. The literature up to date, including a case lately reported by Dohrn (Königsberg), contains twenty-nine cases, bearing the above gloomy figures of 44.9 per cent. mortality.

In view of these facts the case to be presented, and especially the technique of the operation, will contain points of no little interest to the surgeon.

The patient, a boy, aged three years and eight months, came under my observation on November 14, 1890. According to the statements of the parents the child had been complaining since June, 1890, of pain and general discomfort in the right side of the abdomen. Just beneath the free margins of the ribs there appeared a swelling or protrusion which led an irregular physician in charge of the case to the diagnosis of "hypertrophy of the liver." Until two weeks before I was consulted the boy had been engaged in his childish pastimes, playing as usual and giving no evidence of the frightful process which was going on within.

The unmistakable growth, which was now diagnosed, appeared so extensive that I expressed an unfavorable view of operative interference. The tumor filled entirely the lumbar and half of the umbilical region, extending from one and a half inches above the anterior superior spine of the ilium to the free margin of the liver, and on the right side it extended nearly to the middle of the left rectus muscle. It gave a peculiar elastic, almost fluctuating, sensation when palpated; so marked, in fact, that the idea of a cystic growth was entertained by a consultant. The thoracic viscera were normal and nothing of pathological import was revealed by a careful urinary analysis.

In the face of these facts and the tender age of the child the case appeared, to say the least, formidable; so that taking into consideration the general circumstances of the case, and having in mind the great mortality from the operation, I expressed a reluctance to interfere. The father, however, insisted, and accordingly preparations were made for operating on the following day.

Under chloroform I made an incision six inches in length, extending from the margins of the quadratus lumborum muscle to midway between the last rib and the crest of the ilium. A few strokes of the knife brought the tumor to view. It presented a peculiar grayish color, with large venous trunks radiating over its surface. An attempt was made to separate the tumor from the ascending colon without entering the peritoneal cavity; failing in this, however, an opening some five inches in length was torn in the peritoneum. Firm adhesions had formed in almost every direction around the tumor, which made the enucleation of the growth exceedingly difficult. In separating some of the adhesions the capsule of the tumor was ruptured, and with a sudden gush the larger portion of the soft jelly-like mass escaped into the abdomen. Time was an all-important factor, and without stopping to meet this accident I hastily separated the adhesions binding the growth to the hepatic flexure of the colon and liver. I quickly formed a pedicle of the blood-vessels and ureter, and then passed an aneurismal needle between the latter and the vessels, and tied off the kidney with a modified Staffordshire knot. Having completed this, I introduced my hand into the abdomen and removed all the soft material which had escaped into the cavity. The abdominal cavity was thoroughly flushed out with hot water and carefully searched for any remnants of the jelly-like mass.

The rent in the peritoneum was closed with a continuous catgut suture, and the muscles and skin were approximated with silk sutures. A tampon of iodoform gauze was inserted into the deeper part of the wound, and a heavy dressing of bichloride gauze

[1] Deutsche Zeitschrift für Chirurgie, 1889, Bd xxix.

[2] Arch. für Kinderheilk., 1890.

and absorbent cotton was applied and retained in position with a broad bandage.

The shock of the operation was severe and he did not rally completely for four or five hours. The amount of blood lost during the operation was of necessity considerable. Every effort was made to complete the work in the shortest space of time, the entire operation lasting but twenty-three minutes. Fortunately the wound healed by first intention, and the convalescence of the little patient was rapid.

After removal of the gauze tampon on the third day no further provision for drainage was deemed necessary, and a permanent dressing was placed over the wound. This was not removed for two weeks. Three weeks only had passed after the operation, when the boy resumed play indoors, and in less than a month he was in a fair state of health and able to be out of doors. For a period of two months he was free from all symptoms of the original trouble; but within the past ten days he has manifested some peculiar gastric disturbances which I fear indicates a metastasis. As might be supposed, the child's condition before the operation was deplorable. But after the removal of the offending growth he improved in every respect. His appetite was excellent and his strength seemed fully restored.

February 3d. On the night of January 26th the child was taken quite ill and gradually sank, dying February 2d. A metastasis to the liver and stomach had taken place and the tumor almost equalled in size the original growth in the extirpated kidney.

TREATMENT OF PLACENTA PRÆVIA.

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MY excuse for venturing any opinions on a subject upon which so much has already been said by eminent writers is its extreme importance, and though I can offer nothing particularly new, I will attempt to present in a manner as brief as possible the most reliable means at our disposal to treat one of the most dangerous complications of labor. In text-books, as a rule, heroic measures are recommended and immediate interference is advised in cases where the hæmorrhage is at all alarming and the child is supposed to have arrived at a viable age. The object of this communication is to plead for more conservative treatment. The fact that forcible dilatation of the os and the turning of the child are operations in themselves so grave that they may cause the death of both mother and child, and that even then the entire placenta may be expelled before the birth of the child without the loss of any serious amount of blood, would seem to justify this plea. This was forcibly impressed upon me about a year ago, when I was called upon to treat a case of this nature, and though the child was born dead, the mother lost no more blood than during a normal labor.

Unfortunately such favorable terminations are the exception, and, as a rule, in cases of abnormal attachment of the placenta, the skilful, intelligent, and timely assistance of the accoucheur is imperatively demanded. At any period of gestation hæmorrhage may set in, and it is generally the first symptom pointing to an abnormal attachment of the placenta. At times the loss of blood is only small and is spontaneously arrested; at other times the amount is so large and so sudden as to at once place the life of patient in jeopardy. It is usually held that in these cases, particularly in advanced pregnancy, it is best and safest to at once induce labor; but my limited experience would seem to teach that, as a rule, hæmorrhage can be arrested by proper tamponing, and that it is safer to wait for labor to set in spontaneously than to induce it artificially.

When called upon to treat hæmorrhage the result of abnormal attachment of the placenta, I would content myself with arresting the hæmorrhage until labor sets in spontaneously. After labor has set in, I would rupture the membranes as soon as possible. In partial placenta prævia this can be done during the earlier part of labor; in the central form it will probably be impossible until labor is well advanced and the os well dilated. It will be found, however, that at the very beginning of labor the flow of blood is most alarming, and that as the os becomes more and more dilated, the flow of blood becomes more and more diminished. If, however, after the complete dilatation of the os the patient should still continue to lose blood in considerable quantity, and her condition be such as to imperatively demand immediate delivery, turning may now be resorted to, and can, as a rule, be readily accomplished if the attendant will take time and first make out carefully the relation of the child to the mother. Beside insisting upon absolute rest and treating general symptoms as they may arise, it would seem to me that we may safely rely upon the tampon for almost completely arresting all hæmorrhage.

The use of antiseptic material for tamponing renders it unnecessary to replace the tampon every five or six hours, as advised in our text-books. The frequent introduction of a tampon into the vagina is a source of great annoyance to the patient, and has a tendency to render the vagina very sore and painful. Antiseptic tampons can be safely left in place for twenty-four or forty-eight hours.

The vagina cannot be successfully plugged without the use of either Sims's or Simon's speculum. As to

the material to be used for a tampon, I have found corrosive sublimate gauze most useful. It has always seemed to me that failure of plugging is usually owing to the fact that the plug employed is too small, for it is only by packing the gauze well around the os and by filling the whole vagina with the same material that we can expect to control the hæmorrhage successfully.

It will frequently be found that these tampons excite labor pains, thereby assisting in bringing labor to a rapid and successful close. While labor is in progress the plug may be expelled during a pain, and if labor has not sufficiently advanced, it may become necessary to again and again plug the vagina until the finger can reach beyond the margin of the placenta and rupture the membranes. As soon as this is done, labor will rapidly come to a close; the presenting part will insinuate itself in the os, and in doing so will arrest the hæmorrhage.

To reiterate, it would seem that it is not judicious, as a rule, to forcibly induce labor, but that it is safer to wait for labor to set in spontaneously. All antepartum hæmorrhages can be completely controlled, as a rule, by properly plugging the vagina. These antiseptic plugs may be safely left in place for twenty-four or forty-eight hours, and can be renewed whenever required. After labor has set in, the membranes should be punctured as soon as practicable.

CAN HYPERMETROPIA BE HEALTHFULLY OUTGROWN?[1]

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IN the study of refraction and its anomalies it might be claimed that little advance has been made, in spite of the immense amount of work that has been done in this direction, since the era inaugurated by the treatise of Donders. That treatise marks a stage which some of the ophthalmologists of to-day have not yet attained; and while progress, real and considerable, has been achieved at many points, there are some in the profession who seem to close their eyes to this, and persist in holding views no longer sustained by the facts. One of the views thus adhered to is that of the general prevalence of emmetropia—an assumption that has its comfortable side, and its long list of authoritative upholders, yet is surely in conflict with the experience of every careful student. We have outlived Jaeger's teaching that infants are born myopic; and have quite generally accepted the showing of all later investigators that infants are almost without exception hypermetropic. Yet, the investigations which show hypermetropia in the majority of school children have met less acceptance, and studies which even *define* emmetropia as being "normal vision," are offered as sufficient to prove the contrary, while the known prevalence of hypermetropia after loss of the accommodation is explained by a theory of "*hypermetropia acquisita*," backed by the great name of Donders.

Much as we have received from that master, which seems destined to remain an enduring monument of his labor and insight, there is danger that admiration may go much too far in upholding hypotheses which he framed to fill the wonderfully few gaps in his knowledge of this difficult subject. Surely his pupils have ill learned the lessons which he taught, if they insist upon the points which he himself held only tentatively, and try to maintain his unsupported dicta in the face of adverse evidence. It is as a most admiring follower of Donders that I wish to question some of the views which to-day pass current largely upon the authority of his name, for I believe them to be erroneous, and wish that his sanction of them should be forgotten. In a previous paper[1] I endeavored to show that he did not hold the view generally adduced from his much misused paragraph as to "tone of accommodation," which undermines his formal definition of emmetropia; and in the present instance I would call attention to another misunderstood passage of his treatise—that on the frequency of the occurrence of myopia (p. 341). He here gives a diagram, based principally on his case-books, to indicate the relative frequency of the various degrees of refraction error in the Dutch population—a diagram which might be understood to indicate that emmetropia is about as common as the lowest grades of myopia or hypermetropia, were it not expressly stated that the lines representing these are only one-tenth of their proper length. In fact, then, he distinctly states that emmetropia is found in less than 2.5 per cent. of the population, although he had made outside observations in order to correct the possibly erroneous indications obtained from eye cases only. Myopia of $\frac{1}{8}$, or less, he reckons as occurring in 37.5 per cent. of the population, the corresponding grade of hypermetropia in 45 per cent.; and it is only by counting these as practically emmetropic that 85 per cent. of emmetropia is obtained. Donders is far from teaching, therefore, that emmetropia predominates; and although he indicates that he had a larger proportion of myopes than of hypermetropes in his experience, and that the medium grades of hypermetropia are not very common, his results are not extremely different from those which I would urge as correct.

[1] Read at the Twenty-sixth Annual Meeting of the American Ophthalmological Society, July 16, 1890.

[1] Read before the Ophthalmic Section of the American Medical Association, May, 1890. Journ. Am. Med. Assoc., Jan. 1891.

In previous publications[1] I have brought together as completely as possible all the investigations to date of the refraction of the eyes of school-children and others, in the endeavor to learn what is the prevailing refraction of the human eye: with the result of showing a decided preponderance of hypermetropia, a small percentage of emmetropia, and a varying proportion of myopia, depending upon the age, class, and education of those examined. Divergent as were the results which had been obtained by various investigators, the consensus of them all gave distinct pointings, and critical study of the methods used in each examination rarely failed to give full explanation for the deviations from the average result.

These results have hardly received wide acceptance, reiterated as they have been by many of the best students of the subject, and they have been given little of their due importance in practice. Theoretically, it is generally conceded that all children, as well as the new-born, are usually hypermetropic, yet it is constantly being re-discovered as a new fact, peculiar to some special group of individuals, and is employed as a positive proof of any theory that needs support. The frequency and the importance of refraction errors (in many cases) are incontestable, and will be little weakened by such misuse of the facts; yet it does not speak well for the judgment of the profession that men are so prone to ignore or to try to explain away these teachings, except when they have special use to make of them.

Most of the investigations referred to here were undertaken in order to throw light upon the etiology of myopia. They showed a disquieting rise in the percentage of this defect from the lower to the higher classes in schools, and of course there were enthusiasts to raise a hue and cry, thunder at the overburdening of the scholars, and draw all sorts of wide-reaching conclusions from ill-determined and insufficient data. Reaction was inevitable, and Donders, whose dictum, "a myopic eye is a diseased eye," had been the war-cry of the crusade against myopia, led the recoil toward the view that myopia is a mere revolutionary adjustment of the eye to its environment, and wrote: "Were it in my power to eradicate all myopia from the world, I would not do it." To-day Cohn and others are contending that myopia is a curse of civilization, to be fought by the "school physician," and his hygienic dictatorship; while Stilling and others regard all except the high grades with equanimity—rather proud of its prevalence in Germany, as a proof of the national evolution into special fitness for the highest civilization. Hypermetropia, it is held, is a condition of under-development common to the brute, the infant, the savage, and the idiot, and is put off with other childish things when manhood is attained. This view, with various modifications and corollaries, is quite widely held, having gained ground since it was advanced, especially by Landolt and Dor, some twelve years ago, and it is to it particularly that I wish to draw attention.

The short hypermetropic eyeball has always been regarded as in a condition of under-development; yet it is a newer and less prevalent view that hypermetropia is merely a *stage* of incompleteness. It is quite natural that further growth toward the emmetropic standard should be expected of this as of other infantile organs, and this *à priori* view gains strength from the fact that, as Jaeger has shown, the infantile eye lacks about six mm. of its adult axial length. Add to this view the fact that infants are almost invariably hypermetropic, often to a considerable degree, while adults are assumed to be emmetropic, and the position seems hardly open to attack. Further, it has been claimed by some investigators that they have demonstrated this progressive decrease of the juvenile hypermetropia, as when Germann found the average hypermetropia to be 5.3 D. in the first month of life, 3.3 D. in the second month, and 2.3 D. in the earlier years. Hansen also found an average hypermetropia of 1.75 D. in the tenth year, declining to 0.75 D. at the fifteenth.

Decrease in the refraction of eyes, especially of children and young adults, has been frequently observed, not only in cases of progressive myopia, but in a considerable series of hypermetropic eyes, as has been recorded by Drs. Risley, Norris, and others. Yet, I fail to find in any of the instances any reason to believe that such a change was brought about by a physiological growth. All have presented clear evidences of pathological processes, and the combating of these by the usual therapeutic measures for reducing intra-ocular inflammation was followed by a relief of the distressing symptoms usually present, and by a cessation of the change in the refraction. Many of the cases alluded to I have had the privilege of studying, and as others have occurred in my own practice, I have had some experience with the pathological form of the change. But of an increase which could be regarded as healthy, I have met no single instance among many thousand cases.

In a lecture recently published, Macnamara urges that young hypermetropes, even those with absolute hypermetropia, should not be given their correcting glasses, or even under-correcting lenses, for more than the absolutely necessary use at near work, much less for constant wear; and claims that the normal development of the eye, whereby the hypermetropia

[1] American Journal of the Medical Sciences, July, 1885; Transactions of the Seventh International Ophthalmological Congress, 1888.

would be outgrown, might thus be interfered with, and the defect rendered permanent. The same idea had previously occurred to me, and led me to give under-correcting glasses to cases of high hypermetropia, for I had seen enough cases of this kind in which five years had wrought no change in the refraction to feel confident that *under the full-correcting glasses* hypermetropia did not tend to decrease. I have since found occasion in some of these instances to increase the convex lens, because the patient gave evidence of requiring fuller correction. In no case have I observed decrease in the hypermetropia, and I am now wholly sceptical as to its occurrence, and shall rarely repeat the experiment.

Inclining to reject this view, then, as being unsupported by any facts derived from my own experience, and conflicting with much that I have observed, it remains to be seen whether it is tenable in the light of the studies of the eyes of the children in the schools. Some supporting results have been already cited. Are they corroborated by the general result or by other reliable investigations? My answer must be in the negative, since the small decline observed in the hypermetropia seems quite fully accounted for by the causes of pathological distention, which are known to be at work during childhood.

The study of the average refraction of children will be best begun by examining the findings as to the eyes of newborn infants, as to which five investigations, those of Ulrich, Bjerrum, Schleich, Horstmann, and Germann, are available. (See Table I.)

Germann found 19.11 per cent. of infants to have hypermetropia = 9 to 12, and 50 per cent. hypermetropia = 4.5 to 8 D. in the first month; while later there were none over 8, and only 14 = 24 per cent. over 4 D. In his young children he found three eyes with hypermetropia = 7, 8, and 9 D., respectively; 2 = 6, 2 = 5.5, and 7 = 4.5: only 14 = 12 per cent. over 4 D. Yet Schleich found but 1 in 300 as high as 8, and 31 = 7 D.; and none of the other investigators met any such grades. The high average hypermetropia shown by the table rests, therefore, upon the work of Germann and Schleich upon 520 eyes; while among 414 eyes examined by others the average was only 2.6 D.; and among 756 eyes, as to which the grade is not specifically noted, the lower grades seem to have predominated, *e. g.*, 2 to 2.5 among Koenigstein's 562 cases. Horstmann's very careful work was done after the first week of life, and it is highly probable that just as he saw practically nothing of the retinal extravasations frequently met in the first week, so, too, he did not see the accompanying swollen disc, the temporary prominence of which was probably measured by the others. Thus only can we understand the remarkable decrease of 2 D. in the average hypermetropia from the first to the second month of life (from 5.37 to 3.30) found by Germann. It seems probable that the average hypermetropia about birth is rather below than above 3 D.

Passing on to the results in young children not yet of school age (Germann's were from one and

TABLE I.—REFRACTION OF NEWBORN INFANTS.

Hypermetropic eyes,	0.5	1.0	1.25	2.0	2.5	3.0	3.25	3.5	3.75	4.0	4.5	5.0	5.5	6.0	6.25	7	8	9	10	11	12	?
934	4	56	6	223	14	95	8	4	7	220	18	72	25	75	11	65	1	12	2	2	3	14

Aggregate hypermetropia, 3511. Average hypermetropia, 3.76.

TABLE II.—REFRACTION OF VERY YOUNG CHILDREN.

Hypermetropic eyes,	0.5	0.75	1.0	1.25	1.5	2.0	2.5	2.75	3.0	3.25	3.5	4.0	4.5	5.0	5.5	6	7	8	9
339	28	1	82	3	50	65	29	2	31	2	4	22	7	5	2	3	1	1	1

Aggregate hypermetropia, 710. Average hypermetropia, 2.10.

TABLE III.—REFRACTION GRADES IN THE SCHOOLS.

Age	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	>20
Hypermetropic eyes . .	212	222	281	366	795	955	1044	889	849	454	381	400	338	143	50	151
Average hypermetropia,	1.15	1.27	1.08	1.23	1.48	1.24	1.29	1.30	1.09	1.27	1.26	1.08	1.09	1.00	1.03	1.43

Some caution is probably necessary in accepting as general the results of several of the investigations, even though they give evidence of rather special accuracy. Their discordance with other results, apparently as carefully obtained, brings their weight somewhat into question, and indicates that, though perfectly accurate, they may be accidental. Thus

one-half to ten years, but unschooled), the few available records are as in Table II.

Only Horstmann's earlier study differs from the rather remarkable coincidence of the other figures, with which, too, a further study of his seems to have been in close accord. We may, therefore, accept this average as a little above 2 D., as shown.

Turning now to the results in the schools, and using, as before, every group of figures which affords the requisite data as to age and grade of refraction, we obtain from the studies of Callan, Dennett (Hyde Park and Nantucket), Howe, Emmert, Risley, Collard, Van Anrooy, Hansen, and myself the results shown in Table III.

An almost unvarying grade of hypermetropia would seem to be the average during this period, for the utmost variation is less than 5 D., and even this may be regarded as perhaps accidental. Much of the variation is due to Hansen's figures, his 412 eyes with an average hypermetropia = 1.75 at ten years, and 242 eyes with only hypermetropia = 0.75 at fourteen, change the averages at those ages from 1.20 and 1.22 to 1.48 and 1.09. A very slight downward tendency appears when we sum up the results for each five years of life, the average grade being 1.31 for the second period, 1.24 for the third, and 1.13 for the fourth; that for the whole 7530 eyes being 1.24 D. Data are lacking from which to endeavor to compute the average in early adult life—Seggel's examination of recruits in the Munich garrison stands almost alone. He found with the test-glasses an average hypermetropia = 0.40 in more than 3000 eyes.

Such, then, is the evidence bearing upon our question which I am able to find in the literature; figures which, taken at their face value as all of equal weight, go but a short way toward proving any notable decline in the hypermetropia with the growth of the individual; yet it requires no deep study of the investigations furnishing these results to convince one that they are far from being all of equal value. Further, there are many studies which do not furnish their results in shape for our tabulation, yet are very distinct in their pointings, and probably more trustworthy than some of those used. The strongest case possible has been made for the view that hypermetropia is outgrown, and while I do not propose to undertake the invidious task of showing the flaws in the studies cited, I will point out some of the investigations which seem to be of most weight, and offsetting more or less the results above given.

In his study at Schreiberhau under atropine, Cohn found the average hypermetropia of 295 eyes of children, six to thirteen years of age, to be 1.20 D., with no relation of the grade to the age. Callan, among 346 eyes of negro pupils, found the average grade 1.23 D. present in all ages from six to nineteen years with only accidental variations. Schadow, among the 240 hypermetropic eyes which he studied in Borchum, found an average of 1 D. at seven to eight, 1.7 at nine to ten, and intermediate grades at the other ages (six to fourteen years). Conrad found an average hypermetropia of about 1.25 among his younger pupils (aged six years), with rather higher grades in the next years. Emmert, among his 3279 hypermetropic eyes found an average of 1.16 in the five to ten, 1.38 in the eleven to fifteen, and 1.31 in the sixteen to twenty, the general average being 1.31 D.

Numerous other points could readily be cited in support of the conclusion which I have drawn from my study, that there is a very insignificant decline, if any, in the grade of hypermetropia during school life, and when the occurrence of quite frequent pathological progression toward myopia at these ages is taken into consideration, the surprise must be that the decline is so small. There is some evidence that higher averages of hypermetropia are to be found before the school period than later, but a number of considerations explain away, to a great extent, this apparent showing. All of the reliable measurements of refraction of the very young have been made under a mydriatic; and while far from believing that this introduces any element of error, I must hold them as not strictly comparable with the results obtained without a mydriatic. The grades of hypermetropia met in mydriatic work are in no need of being scaled down, for the reason sometimes urged that the mydriatic must be discounted because it gives a fictitious hypermetropia. Properly used, the mydriatic can only have increased the accuracy of the results. But to make them really comparable, the averages found without a mydriatic most certainly need to be scaled up—are subject to a considerable increment to represent the latent hypermetropia which escaped measurement. The use of the ophthalmoscope, which was all too rare in the investigations cited, can do something toward this end; but only an ultra-enthusiastic ophthalmoscopist could close his eyes to its very numerous shortcomings, and believe that its results could not be decidedly improved upon. One of the investigators quoted above questions his results on the ground that with the ophthalmoscope he was measuring hypermetropia of his own instead of that of the patient; yet a comparison of his objective results show that while he *uncovered* hypermetropia in thirty-five eyes which had no manifest hypermetropia, he failed to see the hypermetropia with the ophthalmoscope in 105 eyes which had already revealed it with the test-glasses. Such results are common among the younger pupils; but my own study of medical students shows that the same thing holds among the elder. Not only did the opthalmoscopic measurement raise the percentage of hypermetropic eyes from 26 per cent. to 72 per cent., but it also increased the average hypermetropia from 0.57 to 0.85 D. So, too, Cohn found among his 299 atropized eyes 98 per cent. of hypermetropia, and an average of 1.20 D., where, without the mydri-

atic, there had been but 82 per cent. hypermetropia, with an average of 0.75 D. Reasons have already been given for the belief that the average hypermetropia at birth is below 3 D., and we here see that the 1.25 of school life should be considered to represent a real average of about 2 D.; so I believe we shall not go far astray if we accept a dioptre and a half as representing the extreme limit of the real average decline in the refraction from birth to adult life.

Such a change in the refraction is far from unimportant, and would abundantly serve the purpose of those who claim that hypermetropia is outgrown, could they adduce any evidence that it is due to physiological growth. In the utter absence of any such evidence, so far as I am aware, and with the all too probable explanation that the pathological progress toward myopia is alone responsible for the change in the many, as it undoubtedly is in the few, my position of scepticism as to any normal decrease in hypermetropia seems fully justified. The burden of proof certainly rests upon those who wish to uphold such a view.

Two arguments deserve notice in closing. In twenty sections of the eyes of newborn infants, Von Jaeger found the average axial length to be 17.5 mm. as against 23.4 mm. in as many adult eyeballs. Yet, these were by no means the shallow eye-balls of high hypermetropia, for in almost every instance the axis was the greatest diameter of the globe, the vertical average being but 16.4 mm., and the horizontal 17.2 mm. While such an axial length in an adult eye might correspond with a hypermetropia of some 35 D., it must not be forgotten that the infantile lens has its full adult thickness, although its diameter is only 6.3 mm. instead of nearly 9 mm., and consequently that its curvatures are such as probably, even in its comparatively homogeneous condition, fully compensate for the proximity of the retina. Whether it has a proportionately forward position,[1] as indicated by the shallow anterior chamber, need not be discussed until some evidence is brought forward to show that the other compensation would not be complete. If it can nearly compensate for so high a grade of axial shortening, it will be difficult to prove that it is not fully competent, however wonderful it may seem, that the eye-ball should undergo such changes in its dimensions without alteration of its refraction.

The other point which deserves a passing notice is the view that the tendency toward myopia is an evolutionary adjustment of the eye-ball for the demands of near-work to which it is subjected in modern civilized communities. Until proof is adduced to show that myopia is actually inherited, such a view has no claim to be treated as even a scientific hypothesis; and its demonstration is almost impossible. It has been repeatedly seen that scoliosis and myopia were developed together by faulty positions of school-children, especially in writing, and whoever undertakes to champion the evolutionary meaning and value of the one may well be challenged to uphold the same view as to the other.

[1] It is quite probable that many of the cases of myopia found at birth, some of which have been observed to decrease in the following months, have been due to a forward displacement or subluxation of the lens.

A CASE OF TREPHINING FOR DEPRESSED FRACTURE AND ENDOCRANIAL HÆMORRHAGE.[1]

BY SPENCE REDMAN, M.D.,
OF PLATTE CITY, MO.

ON November 1, 1890, E. M., aged three years, while playing in the pasture was kicked upon the forehead by an unshod mule. He climbed over the fence and ran to the house, about fifty yards distant.

I saw him one and one-half hours after the accident. He was unconscious, although I learned from his parents that he was able to speak for twenty or thirty minutes after returning to the house. Both pupils were widely dilated and would not respond to light. The pulse was rapid (120 per minute), regular, but wiry. His respiration was 30 and labored, soon becoming stertorous. His axillary temperature was 99⅘°. He vomited every few minutes and passed his urine involuntarily. When I first saw him the muscles of the right arm and leg twitched incessantly. These movements are best described as rhythmic clonic spasms, and were most marked in the muscles of the forearm, and increased in severity up to the time of the operation. He held his head slightly to the left side. A horse-shoe-shaped scalp wound four inches long was discovered on the right side, the centre being immediately over and one-quarter of an inch above the right eye, the two ends extending upward.

The scalp was well shaved and the wound thoroughly cleansed with bichloride solution. The flap was then raised and a fracture of the frontal bone one and a half inches long was found. It was situated midway on a line drawn from the glabella to the superior stephanion. Its direction was transverse and half an inch of the central portion was depressed about one-fourth of an inch. Fearing that the internal table was more extensively fractured, and being convinced that a clot had formed from a rupture of one of the anterior branches of the middle meningeal artery, I trephined three hours after the injury, being assisted by Drs. Baldwin and Coffey. A hypodermic injection of morphine and atropine was given and the patient placed under the influence of chloroform. The instruments were sterilized by heat, placed in a carbolized solution, and a 1-to-2000 corrosive sublimate solution was provided for the sponges. A button, including the depressed portion of the external table, was removed

[1] Read before the Medical Society of the Missouri Valley, December, 1890.

with a three-quarter-inch Galt trephine. The internal table was found to be extensively fractured—a fissure at right angles to the transverse fracture, which also involved the internal table, extending to within a short distance of the orbit. The internal table on the outer side of this was depressed and considerable trouble was experienced in elevating it. A clot about three inches in diameter, the greater portion of which was below and back of the trephine opening, was removed with the finger and spoon. The wound was then thoroughly washed out with bichloride solution and the dura found considerably contused and containing a few very small punctures; it did not bulge in the opening and was not incised. A few strands of catgut were placed in the wound to effect drainage, and the scalp closed with continuous catgut and four interrupted silk sutures, except one-half inch of the lower portion.

The usual antiseptic dressings were applied and held in place by adhesive plaster.

Immediately upon recovery from the chloroform the patient was able to talk, and there were no more muscular tremors. Occasional vomiting, however, continued for thirty-six hours. The patient was put upon milk diet and one or two doses of morphine were given daily to insure quiet. The wound was dressed fourteen hours after the operation, at which time the catgut drain was removed, as there was not sufficient discharge to warrant its retention. At this time the pupils were but slightly dilated and responded to light; pulse was 90, respiration 20, temperature 99°, and patient complained of slight pain in the head.

The wound healed by first intention, save the portion left open for drainage, which had closed by granulation at the end of ten days. At the present time, one and one-half months after operation, patient is in every respect well, and the button-hole partially filled with fibrous tissue.

I regard the foregoing case as interesting and worthy of consideration, not only because the rapid subsidence of serious brain symptoms adds another link to the now long chain of cases that make early operative interference imperative when there is compression of brain tissue, be it from depressed fracture or hæmorrhage, but also because it, in the main, bears out the statement that centres of special sense and voluntary motion exist and can be pretty accurately mapped out upon the skull. In connection with this it must be remembered that the relations between the brain and skull differ at different ages. Owing to the imperfect development of the frontal lobes in the child, as Hamy has pointed out, the fissure of Rolando lies much farther forward and is more oblique (52°) in its direction. Symington has also told us that the Sylvian fissure is much farther above the squamo-parietal suture in the child than in the adult—from one-half to one inch above. The adult relation of these parts is probably not attained until the ninth or tenth year.

It is owing to this fact, in the case I have just recorded, in which the injury was well forward, that symptoms showing compression of centres as far back as those for the movement of the opposite leg were present.

Aphasia in this case must have been due to pressure on the right inferior frontal convolution, and while we generally expect aphasia to be the result of injury to the left hemisphere, yet several cases have been recorded in which it followed disease of the right lobe and of lesion of the left in which it was absent.

As a general rule, the seat of speech may be said to depend on the person being either right or left-brained. Most persons are right-handed and left-brained; hence, aphasia is generally due to lesion of the left hemisphere. My case departs from this rule, however, in that the boy is right-handed.

According to Kuhn, the most constant, and by far most valuable, symptom of hæmorrhage from the middle meningeal artery is a certain period of time between the accident and unconsciousness. This period is longer or shorter in accordance with the size of the artery, and is due to the fact that a certain length of time is necessary for enough blood to accumulate to produce unconsciousness by pressure. In the case I have described it was between twenty and thirty minutes.

While there was no hemiplegia (the next most valuable sign of hæmorrhage) in the case, I am convinced that the muscular tremors were warnings, and that the arm and leg would shortly have become paralyzed. The rapid stertorous breathing, frequent pulse, dilated immobile pupils, and elevated temperature all pointed to hæmorrhage, but they had not the diagnostic importance of the lapse of time before unconsciousness and hemiplegia.

I shall not burden the reader with statistics showing the importance of operative treatment, since I feel sure all will agree that when there is reasonable ground to believe that the middle meningeal or any of its branches has been injured, the skull should be opened. The position for the opening must be determined by the symptoms and not the location of the injury, since the artery is not infrequently ruptured on the opposite side to the skull wound. Failure to recognize this fact has caused many lives to be lost. Had the aphasia in my case continued after the opening on the right side had been made, I should have felt justified in trephining over the left inferior frontal lobe, for we sometimes have rupture of both middle meningeal arteries from the same blow.

Two things are, in my opinion, imperative in all operative procedures upon the brain, viz.: thorough drainage and antisepsis. It is chiefly to these that I attribute the success of the operation.

The advisability of re-implanting the trephine button is still a mooted question. As even large

portions of the skull can be removed and the opening left to heal over with fibrous tissue, the advantages to be gained by implantation of the button or transplantation of bone from an animal can hardly repay the delay in healing. As most operations are performed for pressure, and implantation causes a flattening of the skull surface, it would seem an unwise procedure. For these reasons I have never replaced it; however, should it be desired to close the opening with osseous tissue, McEwan's plan is preferable to replacing the entire button, as by the latter plan there is danger of necrosis.

PELVIMETRY FOR THE GENERAL PRACTITIONER.

BY J. WHITRIDGE WILLIAMS, M.D.,
OF BALTIMORE.

THE subject of pelvimetry, important as it is, is usually totally neglected in most of our medical schools, and any knowledge that the practitioner has of the subject he has been obliged to glean for himself. And he receives but little encouragement to pursue its study when he reads Lusk's statement that in our native American women abnormal pelves are rare, and hears physicians of experience state that in thousands of cases they have never met with a single deformed pelvis; though they will willingly admit that they have performed craniotomy on numerous occasions.

Of course, these statements apply only to those marked cases of deformity which no one could fail to recognize after a most casual examination.

While the extreme degrees of deformity may not be as frequent here as in Europe, still they do occur, and that often enough for us all to be on the lookout for them.

These, however, constitute only a small portion of contracted pelves; and through our neglect of pelvic measurement we lose sight of the far more frequent cases of moderate contraction, in which there is no absolute bony resistance to the passage of the child, but still resistance enough to make the labor most difficult and dangerous, or to cause such abnormalities in the position or presentation of the fœtus that its delivery may become almost impossible. Michaelis called attention to this fact years ago, and stated that the evil effects of a moderately contracted pelvis were due, not so much directly to the bony resistance as to its effects upon the position and presentation of the child, and showed that transverse presentations occurred from four to five times more often, and prolapse of the cord alongside of the presenting head ten times more often, in contracted than in normal pelves.

In the German institutions, where pelvic measurements are an integral part of the conduct of each labor case, the frequency of contracted pelves—that is, pelves with a conjugata vera of 9½ cm. (3¾ inches) and less, was estimated at from 13 to 14 per cent., the general average being about 14 per cent. or one-seventh of all cases. Admitting that the ratio is somewhat smaller in America, which we cannot positively affirm, for, as far as I know, no one in this country has measured a sufficient number of consecutive cases to obtain reliable estimates, still we cannot afford to attend from one-seventh to one-eighth of our obstetrical cases in the dark and then talk of being skilful and scientific obstetricians.

History.—Our knowledge of contracted pelvis is of comparatively recent date; for to the ancients the condition was unknown and they believed that the child was born by its own efforts, aided by the mobility of all the pelvic bones. It was not until the latter part of the sixteenth century that Aurantius first discovered the contracted pelvis as an anatomical fact. This knowledge was first practically applied by Deventer in the first part of the eighteenth century, who rather accurately described in his book, *A New Light for Midwives*, the principal forms of contracted pelvis, namely, the justo-minor and the flattened, and their effects upon the mechanism of labor, and upon the fœtal head. In the middle of the eighteenth century flourished the great Smellie, who not only recognized the deformity and its effects but was the first to estimate the conjugata vera by measuring manually the conjugata diagonalis, and who recorded cases in which the antero-posterior diameter was not more than one and a half inches. At the end of the century, Baudelocque introduced the external methods of pelvic measurement. He placed the greatest reliance on the external measurements, especially on the external conjugate, which he discovered, and from which he believed he could calculate the conjugata vera with almost absolute exactness, his results only varying a few lines.

These three men laid the foundations for the doctrine of contracted pelvis and pelvimetry; but the honor of placing the subject upon a scientific basis must be ascribed to the famous obstetricians of Kiel, Michaelis and his successor Litzmann. These two measured the pelves of all the cases that came under their care and were thus able to study the numerical proportion of contracted to normal pelves, thereby showing that contraction was far more frequent than was generally supposed. By accurately observing the mechanism in these cases, they were able to present the subject in so clear and so exhaustive a light that they are still our standard authorities.

Since the time of Michaelis nearly every Continental obstetrician of prominence has devoted considerable time to the subject, without, however, add-

ing much of real importance to the able work of his predecessors, while we, on the other hand, have allowed the subject to fall into almost total neglect.

Aims.—The scientific obstetrician naturally aims to learn all that is possible about the deformity in each case, and will put himself to considerable pains to determine exactly what form of contracted pelvis he has before him, and exactly how and to what extent it is contracted. To do this requires special training and practice, such as the general practitioner is not supposed to possess and which naturally cannot be demanded of him. But he should be expected to recognize the ordinary forms, especially the generally-contracted or justo-minor, and the flattened rhachitic or non-rhachitic pelvis, and should be able not only to recognize the species of deformity, but also approximately to estimate the amount of contraction, especially in the antero-posterior direction. Indeed, on account of the rarity of the other forms of contraction and the extreme difficulty in estimating the other diameters and the varying results of different methods, pelvimetry for the general practitioner resolves itself into recognizing a flattened pelvis and estimating the conjugata vera.

Methods.—Pelvimetry may be divided into external and internal methods; only the latter, however, being capable of giving anything like accurate results. External measurements, except by means of a pelvimeter—and almost any form will do—are utterly worthless, and even those made by means of a pelvimeter point only to the species of the deformity without giving definite information as to its degree.

The principal measurements of the pelvis are three in number:

1. Distantia spinarum—the distance between the anterior superior iliac spines.

2. Distantia cristarum—the distance between the most widely removed points of the iliac crests.

3. Conjugata externa or Baudelocque's diameter—the distance from the depression below the spine of the last lumbar vertebra to the outer surfaces of the symphysis pubis.

Of these, the first two are by far the most important, and they average 26 and 29 cm. (10¼ and 11½ in.) respectively. Mere variations in measurement are not of much importance, so long as the relative proportion between the two remains the same. The careful work of Scheffer some twenty-five years ago showed that the measurements do not justify us in drawing conclusions as to the transverse diametres of the superior strait, as was formerly supposed. Scheffer showed that with equal external measurements, the transverse diameter of the superior strait might show a difference of 3.3 cm. Skutsch has lately verified these results.

While these measurements do not give the much desired transverse diameter, they do give us much valuable information as to the shape of the pelvis. If, for example, in connection with a shortened conjugata vera, both the measurements are markedly decreased, but still retain their relative proportion to each other, we are justified in concluding that we have to deal with a generally-contracted pelvis.

In the rhachitic pelvis, this relation between the spines and crests vanishes, and the distantia spinarum increases at the expense of the distantia cristarum, and may even exceed it, according to the extent to which the iliac bones are flared out. In this latter case, of course, the distantia cristarum cannot be measured in the usual way, and to obtain it we measure the crests at a point from 6 to 7 cm. behind the spine.

In the simple non-rhachitic flattened pelvis we do not get this increase of the distantia spinarum at the expense of the distantia cristarum, for the iliac bones are not flared out, as in the rhachitic form. Baudelocque's diameter may be dispensed with by the practitioner, for the researches of Michaelis, Crede, Schröder, Dohrn, and Skutsch show that it is not nearly so exact as its originator considered it when he stated that, by deducting three inches from it, he obtained the vera with great accuracy in thirty-five cases, his results differing only a line.

This diameter varies in the living from 16 to 23½ cm. (6½ to 9½ ins.), with an average of about 20 or 21 cm. (8 to 8¼ ins.), and to obtain the vera the average amount to be substracted is 9.2 cm. (3½ ins.). But the results vary so much that they cannot be relied upon, and the most that we can say is that a Baudelocque's diameter of less than 16 cm. (6.4 ins.) indicates a contracted pelvis in nearly all cases; less than 18 to 19 cm. (7.2 ins.) in about half the cases; while one of more than 20 to 21 cm. (8 ins.) rarely does so.

Internal methods.—The main point of importance for the general practitioner is the estimation of the conjugata vera, and for its determination many methods have been devised. All the instrumental methods leave much to be desired, for they are always inaccurate or cumbersome, or both. And all methods for measuring the vera directly with the hand are inaccurate, and require for their performance the introduction of the whole hand into the vagina. So, from a practical point of view our chief reliance must be placed upon its estimation from the conjugata diagonalis; that is, the distance from the promontory of the sacrum to the lower margin of the symphysis pubis or the ligamentum arcuatum. To measure the diagonalis, the patient is placed in the dorsal position, and, if in bed, a small pillow is placed under her hips, so that the forearm of the examiner may be depressed to the proper position;

then the index and middle fingers of the left hand, lying one upon the other, are introduced into the vagina, while the remaining fingers are folded against the palm of the hand and serve to press up the perineum. Then the forearm is depressed, and we attempt to reach the sacral promontory; having reached it, we press the ulnar side of the tip of the middle finger against it and retain it in this position, while with the radial side of the same hand we press hard against the lower margin of the symphysis. Then with the finger-nail of the index finger of the right hand we mark the point at which the ligamentum arcuatum touches the measuring finger. The distance from the tip of the middle finger to this mark gives the desired measurement.

This method, by a little practice, gives almost perfectly accurate results—accurate within ¾ mm. Knowing the diagonalis, it is easy to estimate the vera by subtracting from it a given sum—1½ to 2 cm. (three- to four-fifths of an inch). The amount to be subtracted varies under different circumstances, as will be readily understood when we consider our measurements as forming a triangle, of which the conjugata vera and the diagonalis form two sides and the symphysis the base. It will then be readily seen that, with an increase in height of the symphysis, the diagonalis becomes longer in proportion to the vera, and, consequently, the amount to be subtracted is increased. More important than this, however, is the inclination of the symphysis, or the angle it forms with the conjugata vera, for it is readily seen that the greater this angle becomes the longer becomes the diagonalis, and the greater the amount to be deducted to estimate the vera. In general terms, then, the higher and more perpendicular the symphysis, the greater is the amount to be deducted from the diagonalis—ordinarily a little more than 1½ or 1¾ cm. (three-fifths of an inch) in normal and generally-contracted, and 2 cm. (four-fifths of an inch), or a little less, in flattened pelves. This method gives excellent results in lying-in women, and is readily applied in the non-pregnant, especially if multiparous, though it is usually more or less painful.

In non-pregnant women with lax abdominal walls we may employ the so-called external direct method to which Credé and Hardie called attention some years ago, and which Dr. H. A. Kelly is now engaged in studying and testing.

In this method the woman is placed on her back and the abdominal walls gently pressed in by the tips of the fingers of the left hand, till the tip of the middle finger rests over the promontory; then the palmar surface of the hand is brought down upon the symphysis, and with the finger-nail of the right index-finger we mark the point at which the palmar surface crosses the upper surface of the symphysis. This distance, without making any deduction for the thickness of the abdominal walls, represents the conjugata vera with tolerable exactness—within from ½ to 1 cm.—and affords a ready, accurate, and convenient method of measurement for gynecological cases and in the early months of pregnancy.

With these comparatively simple methods at our disposal, I do not consider that we are justified in attempting to conduct a labor case in which there is the slightest possibility of the existence of a contracted pelvis, without measuring the pelvis before proceeding to any action whatsoever.

Indeed, I do not think Fritsch was far wrong when he said "that the physician who would conduct a pathological labor case without mensuration is as inexcusable as he who does not examine the urine when œdema is present"; or Dohrn, who says "that the physician who does not measure the pelvis is comparable to one who diagnoses heart and lung troubles without the aid of auscultation and percussion." Such being the sentiments of these eminent men, it certainly behooves us to receive them with respect and to attempt to follow their advice. To attain results worthy of attention, practice in the art is absolutely necessary, and the only way by which we can attain the requisite skill is by taking every possible opportunity to measure the pelvis. I would therefore advise all who wish to raise their obstetric work above the level of mere midwifery to make it a part of the routine of the first obstetric examination, in every case, to measure the conjugata diagonalis, and from it to estimate the vera; and if it be at all contracted, to take the external measurements, especially the distantia spinarum and cristarum, and from these three measurements attempt to determine the species, and, roughly speaking, the degree of the deformity.

Anyone who will regularly pursue this course will be amazed to find how many moderately-contracted pelves do exist, and will then be able to explain in a rational way many difficult cases of transverse and other presentations, which previously he merely turned or delivered by forceps or cranioclast, and whose abnormal presentation or mechanism he ascribed to some freak of nature rather than to a rational and sufficient cause.

Of course, the practical man may object that what we gain by this is the mere satisfaction of a scientific explanation for hitherto inexplicable facts, and say that it is all well enough for those who pretend to be scientific, but to the practical, every-day man it is useless and not worth the time consumed.

If this were all that we gained from pelvimetry, I contend that it would still be worth the trouble.

But this, while important, is only a small part of what we gain. What we really gain is a correct diagnosis and prognosis, and with these made, treatment follows as a matter of course.

What has been said of the results of pelvimetry in moderate contraction applies far more forcibly to those cases in which more marked contraction exists. For in these cases the results of measurement should be almost our only guide to correct treatment, and should decide for us whether we are to propose Cæsarean section, resort to forceps or version, or allow nature to take its course. With a pelvis of 5½ cm. (2¼ in.) or less, we have an absolute indication for Cæsarean section, for it is attended with as little or less danger to the mother than craniotomy, not to speak of the great gain of saving all the children if resorted to at the proper time. In pelves between 5½ to 7½ cm. (2¾ to 3 in.) we have the relative indication for Cæsarean section—that is, we must offer our patient the choice between it and craniotomy, with the chances in favor of Cæsarean section.

If we measured all our labor cases, would we not more frequently than now discover those requiring abdominal section and promptly institute the proper treatment, instead of waiting till the woman has been in labor many hours, or perhaps days, and, after having exhausted her by numerous attempts at forcing delivery, to propose a capital operation?

It is the neglect of making a correct diagnosis that makes our Cæsarean section statistics so much inferior to those of our German confrères: I am confident that very few of us are willing to admit that it is due to inferior operative skill on our part. It is entirely due to the fact that most of our operations are done on exhausted or practically dying women who naturally cannot be expected to recover; while the Germans determine on the operation before labor sets in, or certainly after the first examination, and do not allow the case to go on blindly.

What has been said about the Cæsarean section applies with equal force to the induction of premature labor; and there can be no possible excuse for allowing a woman—after a difficult craniotomy, for example—to go on to full term again without measuring the pelvis and determining beforehand what should be done. With a pelvis of 8 cm. (3¼ in.) and less, the operation is certainly indicated, and with our present aseptic methods should hardly be more dangerous than a normal labor, and far less so than the craniotomy that is sure to follow if the patient is allowed to go on to term.

I hope these remarks will lead some of us who have hitherto neglected this important part of obstetrics to take up its study; I am sure that, adding the estimation of the diagonalis to the ordinary obstetric examination in each case, they will be surprised to find how many pelves are contracted within moderate limits, and will occasionally find cases contracted to 8 cm. and less.

In these latter cases, unless the physician be a skilful operator and is prepared to perform Cæsarean section under the strictest aseptic precautions, I do not consider that he does his duty to his patient if, when he has made his diagnosis, he does not immediately call in a competent specialist, who shall decide what is to be done. If an operation be decided upon, he will be able to operate upon a patient with the chances in her favor, instead of upon the usual exhausted and dying case.

APPARENT ANTAGONISM BETWEEN THE STREPTOCOCCI OF ERYSIPELAS AND SYPHILIS.

BY ORVILLE HORWITZ, B.S., M.D.,
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IT is generally conceded at the present day that syphilis is due to a specific microbe. The cases here recounted would seem to indicate that this disease is due to a pathogenic microörganism, and that the poison produced by the microbe of syphilis is antagonized by that which produces erysipelas:

CASE I.—During the first week of June, 1890, a married man, aged forty years, who stated that he was a clerk, presented himself at the Jefferson Hospital for treatment. He was suffering from phagædenic chancre. The sore appeared ten days after sexual connection and was spreading rapidly. The foreskin was œdematous, with phymosis as a complication. Circumcision was performed, the phagædena treated in the usual manner, and the patient sent to the surgical ward. In the course of a week the inguinal and post-cervical glands began to enlarge, and two weeks later the patient suffered greatly, especially at night, from rheumatic pains in his bones.

One week after admission to the hospital he had a chill, followed by high fever, which lasted thirty-six hours. A superficial pustular eruption, interspersed with a tubercular eruption, soon after appeared on the body, accompanied with alopecia and mucous patches in the mouth.

The early appearance of the pustular eruption proved the case to be one of malignant syphilis.

The usual specific treatment was ordered, and three weeks afterwards he was discharged from the ward and sent to the surgical dispensary, where he presented himself at irregular intervals.

Four months after the appearance of the initial lesion the patient was admitted to the venereal ward of the Philadelphia Hospital completely covered with deep rupial eruptions. He was very weak and anæmic.

The usual specific treatment was employed without very marked improvement. After having been in the hospital about ten days he was seized with a chill, followed by high fever. Erysipelas appeared on the nose and gradually spread over the face and neck. He was at once isolated and the specific treatment was replaced by iron, quinine, and free stimulation.

The patient was in such a wretched condition that both the resident physician and the writer thought recovery impossible; to our great surprise, however, he began to improve, the erysipelas disappeared, and the deep syphilitic sores began to cicatrize, and when he returned to the venereal ward not a single ulcer remained; the deep red scars which covered his body being all that gave evidence of his previous condition.

Specific treatment was once more commenced, and at the end of four weeks he was discharged from the hospital. Mercury in small doses with iodide of potassium is still used, and the patient states that his health is much improved and that he is rapidly gaining in weight.

CASE II.—In the early part of July, 1890, the second case presented itself. The patient, according to the popular term was "a man about town." He was suffering from a deep ulcerating gumma of two months standing, situated on the calf of his leg.

The usual treatment was employed. At the end of three weeks there was no improvement, and finding that the patient was suffering from the debilitating effects of the prolonged heat of the season, and was becoming quite weak, he was advised to try the effects of a sojourn at the White Sulphur Springs, and at the same time to continue the prescribed treatment.

At the end of three weeks the writer received an urgent message from the patient to call at his residence. He was found in bed with high fever and suffering from a severe attack of erysipelas of his left leg extending above the knee. While absent from the city he had abandoned all treatment, kept late hours, and indulged in every variety of dissipation. The ulceration was found to be much deeper and to have extended considerably since the last examination. Large doses of iron and quinine with free stimulation were at once prescribed. During convalescence a large slough appeared at the site of the ulceration, and became detached in a few days. The cavity rapidly filled with healthy granulations, and when the erysipelas had disappeared it was found that a scar was all that was left to mark the spot where the gumma had existed. The patient had no anti-syphilitic medicine during his attack of erysipelas.

There has been no occasion for medical treatment since his convalescence, and he is at this time in perfect health.

There is doubtless a marked antagonism between certain classes of specific microbes. Powlanskay has clearly shown that an antagonism exists between the pneumococcus of Friedlander and the bacillus of anthrax, and also between the micrococcus prodigiosus and the streptococcus of erysipelas.

Neumann[1] reports two cases of apparent antagonism between syphilis and erysipelas. His first case was a woman with gumma of the face, who had three attacks of facial erysipelas, followed by the entire disappearance of the syphilitic lesions.

The second was a case of a man, who was attacked with erysipelas six weeks after contracting a chancre. During treatment for the erysipelas, the chancre disappeared. Constitutional symptoms, which were of the mildest type, did not appear until seventy-two days after the attack of erysipelas.

The foregoing cases of syphilis described by the writer, and those reported by Neumann, apparently cured, or at least modified in virulence, by invasions of erysipelas, would seem to indicate that a certain antagonism exists between the microbes of the two diseases, which may have an important bearing on the therapy of the future.

CLINICAL MEMORANDA.

SURGICAL.

Retention of a Foreign Body in the Larynx for Thirty-eight Years.—The following case of a foreign body being retained in the larynx for a long period of time recently came under my notice, and I have thought it of sufficient interest to put on record, especially as the patient's birth, education, and character place the facts beyond reasonable doubt.

C. M. M., white, aged forty-five years, when only seven years old, put an ordinary pin in his mouth while playing, to keep it from another child from whom he had taken it. While running and laughing, it was drawn into the larynx. Sharp pain was felt for a few minutes, but soon passed off, and nothing more was thought of it. These facts were impressed on his memory by the extreme alarm felt at the time, not only by himself but by his family. His health remained good until about fourteen years ago, or twenty-four years after the accident, when his voice became husky and a chronic cough developed, with emaciation and prostration, leading him to believe that he had consumption.

He was treated by several physicians of Augusta, Ga., near which city he then lived, with some benefit, and was assured that his disease was entirely bronchial.

Since then his voice has remained slightly husky, the cough constant and of varying intensity, but on the whole not very annoying, and he has been quite able to attend to his work.

On January 29th, during a fit of violent coughing, a hard, dark object embedded in a mass of mucus, was expelled from the larynx, and on examination proved to be the long-lost and forgotten pin. No blood came up either then or afterward.

Unfortunately, I was not told of this occurrence for some days, and, owing to the man's occupation, more than a week passed before a laryngoscopic examination could be made. This was thoroughly done by Dr. W. Peyre Porcher, with the result here given:

[1] Allg. Wiener med. Zeitung, 1888.

"The patient's throat was found to be susceptible of a very complete inspection. No marks or abrasions were found other than two somewhat inflamed circumscribed areas, situated directly opposite the posterior ends of both ventricles of Morgagni. From the presence of the spots it was inferred that the pin must have lain across the larynx with its two ends embedded in the posterior edge of the two ventricles."

I have been unable to find any record of a foreign body remaining in the air-passages for nearly so long a time. The nearest approach to it is a case quoted by Gross, in which a piece of bone was retained for seventeen years; and a second, in which the retention was for "upwards of eleven years," spontaneous expulsion taking place in both cases. In the first of these cases, it is known that the bone was retained in the lung for a long time, as it produced disease in that organ of so serious a nature as to cause the patient's death.

While it is manifestly impossible for me to prove, in my case, that the pin was in the larynx all these years, the following considerations make it probable:

1. Symptoms of laryngeal irritation for fourteen years, with absence of pulmonary symptoms.

2. The fact that the laryngeal irritation has greatly improved since the removal of the pin.

3. The appearance of the pin shows that it remained in one place for a long time, as it was covered with an incrustation of considerable thickness, its whole diameter being a fraction over one-sixteenth of an inch. Had it migrated through the tissues, it would have been more or less polished, while had it been loose in the trachea, the symptoms would have been so marked as to demand attention and recognition.

Lastly, the discovery of its probable seat in the larynx, and its ejection directly from this organ, would hardly have happened after thirty-eight years of travel.

The pin was almost an inch in length, and a fraction over one-sixteenth of an inch in thickness, the point being slightly bent.

MAZYCK P. RAVENEL, M.D.
CHARLESTON, S. C.

OPHTHALMOLOGICAL.

Subcutaneous Eyelash.—A woman, aged twenty-eight, presented herself at the eye clinic of the Philadelphia Polyclinic on account of a small projection of the skin of the left upper lid just above the line of the lashes. Vision and refraction were practically normal, and the little prominence on the lid, first noticed a week before, caused no symptoms.

On examination, the fold of skin composing the projection was found to be supported upon the curve of an eyelash imprisoned beneath the epidermis. The lash was readily recognizable by focal illumination through the transparent skin and by the wire-like sensation it imparted to the finger. It was drawn out through a small opening; proving to be about 4 mm. long and quite firmly imbedded in the true skin. I make this note of the case because, so far as I know, it is unique.

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ORIGINAL LECTURES.

SOME PHASES OF RHEUMATISM.

A Clinical Lecture delivered at the Philadelphia Hospital.

BY J. H. MUSSER, M.D.,
ATTENDING PHYSICIAN.

[Reported by W. BLAIR STEWART, M.D.]

GENTLEMEN: I show you this morning a series of cases presenting common points of interest in connection with affections of the joints. It is fortunate that you can have an opportunity to observe the many varieties, here presented, of these most common ailments.

The young man whom you now see, twenty-one years of age, whose family history is good, but who has a personal history of venereal disease and of alcoholism, was well until one month ago. About that time he slept in a cold box-car and got his clothes wet. On the next morning he awakened with pain in one knee. The joint was swollen and he could not stand. This swelling was painful, but there was no fever, or at least there was none when he came under my observation three weeks ago. Rest, with no other treatment, except some local applications, was enforced. When admitted the outlines of the joint were entirely effaced. There was distinct effusion, the patella floated, and fluctuation was easily detected, but there was no increase of heat and no redness. We have, therefore, a simple inflammation of the knee-joint of obscure origin. The inflammation was certainly due to exposure, and not to traumatism, but whether it is rheumatic I cannot say positively. The absence of fever and of all evidence of a rheumatic diathesis, as well as the localization of the process in one joint, largely removes the suspicion of rheumatism. It is a case of mild inflammation with hydrarthrosis, due to cold, and must be distinguished from such local inflammatory processes as inflammation of the bursa of the patella, known as house-maid's knee, and from purulent synovitis.

In the former affection there is no swelling of the joint, but swelling of the bursa over the joint. The portion in front is very painful, and tender on pressure, and there are heat, swelling, and fluctuation. Injury of a severe character or long-continued bruising may be associated with the inflammation as a definite cause. On the other hand, the swelling which you see in this case is similar to the swelling and suppuration due to inflammation, save that there is more heat of the joint, while œdema of the skin is present, and possibly uniform redness of the surface. Purulent inflammation is accompanied by more grave general symptoms, fever is marked, and may be of a hectic type, and it rarely occurs without suppuration in other portions of the body due to pyæmia or septicæmia.

SYPHILITIC RHEUMATISM.

This patient presents a different history; the symptoms of which he complains are not confined to one joint, but many joints and other structures are involved. There is a different antecedent history attending the development of these phenomena. It is true that the boy has been subject to rheumatism from childhood, and that his

habits of life and occupation were such as to predispose to attacks of ordinary rheumatism, but we learn further that he has had gonorrhœa six times, and once a suppurating bubo. In October, 1889, he had a chancre, and, subsequently, sore-throat. The latter is the only evidence of secondary manifestations of syphilis which we can discover, and as he states that he has been subject to sore-throat since childhood, it may have been only an expression of the ordinary rheumatic diathesis.

Nearly three months ago the patient was suddenly seized with pain in the right side of his chest. This was followed in a few days by pain in one leg. The pain in the leg was very severe at night, and was soon followed by pain in the other leg, in the breast-bone and in the shoulder-joint, and was accompanied by severe frontal headache. On admission, the pain in the head was so excessive that he was unable to sleep, and tossed the entire night, fretting and crying out in agony.

On examination we find that there is, as you see, very marked tenderness along the sternum; there is also some swelling and tenderness at the junction of the second rib and costal cartilage on the right side. There is some tenderness along the tibia, but no swelling or nodes on the long bones or the clavicles. I find no changes in the shoulder-joints, although they have been painful since the onset of the disease. When I tap the frontal bone there is marked tenderness. The pains in these localities, as I said, are worse at night. They are not lancinating or much increased by movement, but are grinding, boring pains. The general symptoms that accompany the pains are not marked. There is no fever and no disturbance of the gastro-intestinal tract. There is, however, a change in the lymphatic system to which it is important to call attention, namely, enlargement of the supra-trochlear and post-cervical glands. You will observe, therefore, that we have in this case three marked factors, which must be considered in determining the cause of the arthritic and osteal changes. There is undoubtedly a marked rheumatic diathesis present in the individual. On examination of the heart I find, however, no evidence that the rheumatic storm ever included the endocardium in its vortex. The absence of the anæmia that attends, or that rapidly ensues in cases of true rheumatism, and the persistence of the inflammatory process in the joints which were first affected, lead one to exclude the non-infective forms of rheumatism. When I say non-infective, however, I must speak cautiously, for investigations, not only of bacteriologists, but also of clinicians, seem to show the infectious origin of all cases of rheumatism. The foregoing considerations, with the positive involvement of the periosteum and the occurrence of the pain at night, characteristic of another form of infection, lead one to exclude at once simple rheumatism. The influence of the repeated attacks of gonorrhœa need not be considered, for the affection of the joints is unlike that of gonorrhœal rheumatism, as I will show you in another case.

We have, then, to discuss the relation of this man's illness to the manifest syphilitic infection. That syphilis is the cause of this illness can scarcely be gainsaid, when we call to mind, first, the character of the pains and their location; second, the fact that they are increased at night; third, their association with periosteal inflammation; and, finally, the association with them of enlargement of the lymphatic glands, which indicates an infection of the system. These symptoms tally well with our knowledge of the course and phenomena of syphititic rheumatism. I have been able to apply the therapeutic test since the patient entered the ward, and he has been very much relieved by the use of the remedy which always promptly relieves this affection; I mean the iodide of potassium. The drug has been administered freely during the last forty-eight hours, and his head-pain has improved very much, while the joint and periosteal pain is also much lessened.

GONORRHŒAL RHEUMATISM.

The next patient, thirty-two years of age, is a man who at one time, as you can readily see, was of good physique, but who is now considerably emaciated and strikingly anæmic. He was admitted into the hospital on June 27th, presenting a good family history and a record of good health until two and a half years before admission. In 1884 he had gonorrhœa, and in the fall of that year had, for the first time, a slight attack of rheumatism. In 1888 he had a second attack of gonorrhœa, and in 1889 his rheumatism began. At this time he had inflammation in the right hip and knee, and the latter joint was swollen. He was then in the Pennsylvania Hospital for six weeks, and was discharged apparently cured. He soon had a recurrence, however, of the joint trouble, the right knee usually being the seat of the most severe pain and of marked swelling. The occurrence of these attacks of rheumatism prior to admission lead us to inquire more closely, before making a physical examination, into the previous history of the patient, with the view particularly to determine whether he was subject to any ailments in childhood or later life which are manifestations of the rheumatic diathesis. I find an entire absence of indications of this diathesis both in the history and in the lesions now present which mark the remains of previous rheumatic attacks. He has never been subject to sore-throat or to quinsy; he never has had erythemas, or chorea, and he had no joint-symptoms whatever in early life. There are no rheumatic nodules, nor is there any cardiac lesion. Observe, therefore, that the present rheumatic symptoms developed after the occurrence of a specific infection in a man who had never had any form of rheumatism and who was reaching the time of life when inflammatory rheumatism is not likely to develop.

On examination there are some features of the joint-inflammation worthy of study. The inflammation has been almost entirely limited to the right knee, the second phalangeal joint of the forefinger of the right hand, the right shoulder and the right hip. There is very severe pain on moving the shoulder-joint, but I find no evidence of inflammatory change. The hip-joint is also painful on movement, and there is marked tenderness on pressure. The knee and phalangeal joint we can study more closely. The whole of the knee-joint is swollen, slight fluctuation can be readily detected, and the patella floats. On pressure, there is found a point of pain. The joint is quite stiff and the tissues around are pale and, though not œdematous, seem markedly infiltrated. This infiltration of the tissues about the joint is especially distinct at the phalangeal articulation; here, too, there is swelling, stiffness, and

pain on movement, but more strikingly thickening and infiltration of the tissues. There seems to be slight fluctuation. This joint has been the seat of persistent pain, and, indeed, has from the onset been the one particularly affected. The knee has at no time been free from pain as other joints became involved. This fact, with the local changes about the joint and the general symptoms, are, to me, sufficiently marked factors to confirm my belief that the rheumatism is of the infective form, and secondary to gonorrhœa. Observe the record of temperature, which has been carefully taken: the first week after admission there was no marked intermittency, but the temperature remained high—102° to 103°—until rest, diet, warmth and attention to the secretions caused the perturbed system to become quiet. When all complications outside of the rheumatic manifestations were removed, the temperature became regularly intermittent. A morning rise and an evening fall has continued, the intermitting character being persistent, although there has been a gradual decline both in morning and evening temperature, so that now the latter does not rise higher than 100°. This character of temperature is usually seen in gonorrhœal rheumatism. In addition, a manifestation or rather an accompaniment of gonorrhœa and gonorrhœal rheumatism is present to corroborate our opinion. The patient now has a mild ophthalmia, and has had severe attacks of conjunctivitis, undoubtedly of gonorrhœal origin.

SUB-ACUTE INFLAMMATORY RHEUMATISM.

In the same ward with these cases there is another patient with somewhat similar symptoms. His antecedent history is not less striking, but the present phenomena, while showing similarity in that the joints are involved in the disease, differ in many important particulars. The patient is a man twenty-one years of age, of good habits and without a history of venereal disease. He has never followed an occupation which is alleged to predispose to rheumatism. His previous medical history is of special interest. Ten years ago he had an attack of rheumatism in which all the joints were affected and which lasted seven and a half months. Two years afterward—in 1882—he had a second attack, a third in 1884, a fourth in 1885, and a fifth in 1886 in which the legs were affected. Last year he had a sixth attack, which lasted ten weeks, while this year he has had two attacks, the last of which began two months ago. After the third attack the bones of the ankles and toes became slightly ankylosed and their ends enlarged. The striking features of the present attack are fever of a mild type, not rising higher than 101°, and acid sweats. These sweats persist at present, breaking out profusely three or four times daily, but increased action of the skin may be noted at any time if the bedclothes are removed. His underclothing is always slightly damp, and the peculiar exhalations are readily detected. The urine is scanty, very acid, of high specific gravity, high-colored and loaded with urates and uric acid. The joints affected since he has been under observation have varied; at first the ankle-joints were involved, then one elbow, then the knees, and finally other joints. During the two months that he has been under observation all the joints have been once or twice the seat of pain, with swelling, and some heat, but no fluctuation. As you see him now, the pain is most marked in the hips.

On physical examination of the heart, I find a slight thrill and a murmurish sound which appears to indicate an old obstructive lesion at the mitral orifice. You can readily see, and the blood-count shows, that the anæmia which attends repeated or prolonged attacks of rheumatism has taken place. The pallor of the face and mucous membranes, as well as of the fingers, is marked. The blood shows a reduction of the red cells of about 1,000,000—to 3,000,000, per cm.—and a diminution of hæmoglobin of 45 per cent.

It is not difficult to recognize in this case all the manifestations of rheumatism of a subacute type.

I do not know of any group of cases that more forcibly illustrates the importance of getting definite and accurate information regarding the previous history and pathological antecedents of the patient. On the whole, as a class, if looked at superficially, the symptoms in these cases were much alike, and the true recognition of the exact nature of the illness was made possible only by the knowledge of the previous history, as well as the evolution of the present disorder. Exposure, gonorrhœal infection, syphilitic infection, and the rheumatic diathesis antedated each ailment respectively, and indicated not only for diagnostic but for therapeutic purposes the nature of the affection in each individual.

As intimated previously, the knowledge thus acquired is absolutely essential for the proper management of a case. The special cause of the disturbance indicates the means for its relief. Rest and cold or sedative applications were sufficient for the case of hydrarthrosis. A blister might possibly have hastened absorption, while, later, stimulating applications will be of service. Except attention to the functions of the various organs, no internal medication was necessary. So, too, the indication for the treatment of the case of syphilitic rheumatism was clear, and since the patient has been subjected to specific treatment he has improved rapidly. Twenty grains of the iodide of potassium were administered three times daily. Minute doses of the bichloride of mercury will be added later. Not so easy, however, is the treatment of the case of gonorrhœal rheumatism. Such cases are most obstinate. Their long continuance is probably due to persistent infection; it is therefore necessary first to use local means of treatment that diminish urethral discharge and allay urethral inflammation. For this purpose, antiseptic drugs must be employed both internally and locally. We have in one drug, fortunately, a remedy which seems to meet many indications—that is, salol. It is a good drug for rheumatism. It renders the urine alkaline and prevents it from becoming ammoniacal, and at the same time because it is excreted in the form of carbolic acid almost continuously disinfects the urinary passages beyond the urethra. Theoretically, therefore, it would be of the utmost service in all cases of gonorrhœal rheumatism. In addition, local antiseptic means should be used, and if there are urethritis or inflammatory patches, applications should be made directly to them. To detail these methods would go beyond the bounds of this lecture; it is sufficient to refer to them. The other internal remedies advocated for this form of rheumatism are not satisfactory. It is thought that the iodide of potassium is the most potent of all, and no doubt cases have rapidly improved under its administration. It was used in this case

without brilliant results. Often we must take into consideration, just as it was necessary in this case, the general condition of the patient, and base our therapeutic means largely upon indications derived from this state. The nutrition of the patient, the presence or absence of anæmia, and the state of the digestive apparatus all must be inquired into, and each furnishes an indication for treatment. Notably in this form of rheumatism it should be remembered that the patient must be nourished to the highest possible point. You readily see the flabbiness of the tissues, while the reduction of weight and the marked anæmia show that nutrition has been lowered. And I may tell you that no relief of symptoms was secured, not even any diminution in temperature or modification in the type (pyæmic), was observed until the diet of the patient was entirely changed and the most concentrated and nutritious food administered. The diet *par excellence* for these cases is, of course, a milk diet; but when the digestion is good albuminoids of all forms may be used, and hence not only milk but eggs, properly prepared meats, game, oysters, and fish are to be used, and such green or succulent vegetables as are easy of digestion. I fancy that in most of these cases the exclusion of the carbohydrates is important. Starches and sugars in any form, therefore, are not admissible. Since the diet of this man was increased and its character changed, he has gained weight and strength. His rheumatism has markedly improved and the fever has gradually fallen to the norm.

The treatment of the fourth case requires considerable judgment. Of course due attention in these cases also must be paid to the diet, and food somewhat similar to that previously indicated must be used. The peripheral circulation is somewhat at fault, as shown by the cold and bluish extremities, and massage can be employed over the structures that are not the seat of actual inflammation. The anæmic appearance of the patient indicates the use of iron, and there are many therapeutists who would advocate its employment. I am guided very largely by the condition of the urine as to the class of drugs selected, independently of the state of the blood. It seems to me a safe rule that as long as the urine is persistently acid and high colored and of high specific gravity, containing urates and uric acid in excess, it is absolutely necessary to use alkaline medication in some form, or the empiric medication by which we have been able of late years to control the rheumatic process. Hence, alkalies, salicylic acid or its compounds, or the oil of gaultheria, may be employed. I would prefer to use 10 grains of salicylate of sodium every two hours in mint-water with a small amount of whiskey, and persist in the use of the drug until its physiological effects were produced, or relief from the symptoms occurred. I very frequently add to each dose of the salicylate of sodium 5 grains of the bicarbonate of potassium. If the salicylates are not used, and they are often unsuitable because of the condition of the stomach, simple alkalies are indicated. The use of the bicarbonate of potassium, the ordinary neutral mixture, or the iodide of potassium, is of service. These drugs should be given in such doses as would produce within forty-eight hours an alkalinity of the urine. There is no reason why, with the specifics or with the alkalies, some tonic remedies cannot be employed, such as iron, quinine, or strychnine, alone or combined.

This patient improved somewhat with the administration of salicylate of sodium, but on the advent of damp weather he would have a recurrence of pain. The physiological effect of the salicylate did not persist as it should, and it was thought advisable to use the drug in large doses during a short period of time, alternating with the alkalies. The method employed is about as follows: 15 grains of the salicylate of sodium are given every two hours for eighteen hours; the succeeding day it is replaced by large doses of neutral mixture (½ ounce), and is returned to on the third day for another eighteen hours, smaller doses being given. The method thus used in this case has been most satisfactory, and the patient is much more comfortable, although the case is, from its type, subacute and protracted, and the fact that the patient has had so many previous attacks renders it most difficult to cure the disease.

As soon as the urine becomes persistently alkaline, the remedies indicated can be withdrawn and iron substituted for them. With the iron a laxative alkaline-water may be freely used.

We must recognize the influence of diet. I am confident that a well-regulated, properly chosen diet is essential to procure permanent relief. It should be used for a long time after convalescence, and be one that excludes starches and sugars, and admits of fats in moderation.

HYPERTROPHY OF THE PHARYNGEAL TONSIL.

A Clinical Lecture
delivered at the Rush Medical College,
October 30, 1890.

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Synonymes: Hypertrophy of Luschka's tonsil, adenoid growths in the vault of the pharynx.

This affection consists of an abnormal enlargement of the glandular tissue normally found in the vault of the pharynx. It is characterized by obstruction to nasal respiration, alterations in the voice, and in many cases partial deafness, with catarrhal symptoms and more or less deterioration of the general health.

It is most frequently observed in damp climates and in young children, but it is sometimes met with in young adults.

Anatomical and pathological characteristics.—The changes in the glandular tissue closely resemble those which are frequently seen in the faucial tonsil. The structure is of a grayish or pinkish hue, though sometimes of a bright-red color. The surface is never granular, but often has a lobulated appearance. Enlarged bloodvessels are not present upon the surface, as in many other abnormal growths. The growth may be either soft and friable or exceedingly firm; it consists of lymphoid tissue and an overgrowth of connective tissue similar to that found in hypertrophy of the faucial tonsil. The effect upon the general health depends upon the size and shape of the growth, and the amount of obstruction to respiration.

Etiology.—Heredity undoubtedly bears some part in the etiology of this affection, yet the disease has been understood for so short a time that it is impossible to determine whether the parents of most patients have suffered from a similar complaint. Frequently, how-

ever, several children in the same family will be found so affected. It appears to be due in the majority of cases to the same causes as enlargement of the faucial tonsils. The exanthematous diseases and diphtheria occupy a prominent place in its etiology. Frequent colds, and the strumous and rheumatic diatheses, may also be reckoned among the causes. McDonald[1] attributes the majority of cases to obstruction of the nasal passages and consequent rarefaction of the air in the naso-pharynx during inspiration. This, however, would seem to be opposed by the fact that nearly all cases of cleft palate are also affected by this disease. It certainly does not correspond with my own observation, although it is true that in a considerable number of cases anterior nasal stenosis does exist.

Symptomatology.—There is usually a history of mouth-breathing, with all its attendant symptoms, extending over several months or even years, during which time the parents have been continually disturbed at night by the loud snoring and irregular and noisy breathing of the patient. The child is usually restless and often wakes from troubled dreams during the early part of the night, but toward morning sinks into a heavy sleep from which it awakens with headache or a feeling of malaise that does not wear off for several hours. Nasal or post-nasal catarrh and partial deafness are not infrequently present, and it is common to find that these diseases have come on after diphtheria or one of the exanthematous diseases which has caused hypertrophy of the gland. The defective hearing appears to result from obstruction of the Eustachian tube, and in some cases gradual extension of the inflammation to the middle ear. The deafness is sometimes outgrown as the glands atrophy during advancing life, and it may often be cured by removal of the abnormal tissue, but if allowed to persist for a long time is likely to become permanent. The voice is thick and indistinct in proportion to the interference with nasal resonance, and it becomes impossible for the patient to pronounce the letters *m* or *n*, so that *b* is used instead of *m*, and *d* instead of *n*. In such cases the voice sounds as though the patient had a cold in the head. Shortness of breath upon exertion is often noticed, and in children who are trained to keep the mouth closed, catching or sighing respiration at intervals in order to compensate for the constant deficiency of air is frequently observed. A barking, reflex cough is sometimes present. Frequently a peculiarly disagreeable nasal secretion becomes a fixed condition, and it is often necessary for these patients to clear out the naso-pharynx by the act of hawking. Occasionally, though not in the majority of cases, a rhinorrhœa is present. The nostrils and anterior nasal cavities are found abnormally small in some cases, and in the majority the faucial tonsils are also enlarged. The uvula, pillars of the fauces, and edge of the palate are generally slightly congested, and frothy or muco-purulent secretions are found upon the pharyngeal walls, dropping from the naso-pharynx. In many cases the pharynx is relaxed and the follicles swollen, as in advanced cases of follicular pharyngitis. The follicles, which are usually paler than the surrounding mucous membrane, generally increase in size toward the upper part of the pharynx until just above the edge of the palate they become continuous with the glandular enlargement. With the rhinoscope we should especially examine the posterior pharyngeal wall, the vault of the pharynx, and the choanæ, irregularity of the upper outlines of which is among the most easily recognized signs of the disease. Upon the pharynx the growth has a clearly-defined cushion-like appearance, and is more or less nodular, but in rare instances it hangs from the vault of the pharynx in soft pendulous masses resembling condylomatous warts. In color it is usually pale pink or grayish, but it may have any shade from gray to a deep red. Its surface is never traversed by bloodvessels. In adults in whom atrophy has taken place the remains of the gland may sometimes be seen as small excrescences.

Palpation is often desirable in adults to determine the consistence of the growth, and it is nearly always essential in children, because of the difficulty of rhinoscopic examination. In performing it a gag should be placed between the teeth, and the forefinger of the right hand carried back to the pharyngeal wall and then turned upward behind the palate, where it will at once detect the abnormal growth. Those unfamiliar with the normal feeling of the part should at first search for the septum and move the tip of the finger backward and upward from both sides. Slight bleeding usually follows, though the examination is not especially painful to the patient.

Chronic pharyngitis, rhinitis, or laryngitis will be found in some cases, and occasionally deformity of the thorax will have resulted in the pyriform chest or pigeon-breast.

Diagnosis.—The affection is to be distinguished from nasal mucous polypi, and from fibroid tumors. Mucous polypi seldom occur at so early an age as does hypertrophy of the pharyngeal tonsil, are of a lighter color, semi-translucent, and usually have bloodvessels coursing across their surface. They almost universally grow from the nasal cavities instead of the naso-pharynx, and may be readily detected by anterior rhinoscopy.

Fibroid tumors are much harder than the hypertrophied glandular tissue we are now considering, are frequently attended by severe epistaxis, and upon being touched bleed easily and profusely. They are usually of a bright-red color, and bloodvessels may be seen upon their surface; when large the neighboring parts are distorted—none of these signs being observed in hypertrophy of the pharyngeal tonsil.

Prognosis.—If left to themselves it is probable that in seventy-five per cent. of the cases the gland would atrophy at about the twelfth or fourteenth year of the patient's age, but in the meantime irreparable mischief to the ear, the voice, or the general health may result. In nearly all of the remaining cases the gland would gradually diminish in size and finally disappear before middle life. When the affection has existed for a long time the hearing may be permanently impaired, but, usually, removal of the gland greatly benefits the patients. The natural voice is not always immediately restored, because a person having learned to talk with an obstruction in the naso-pharynx may require a considerable time to overcome the muscular habit, and in adults it may never be entirely remedied. The results of operative procedure, if not too long delayed, are most satisfactory.

Treatment.—Of internal remedies I have occasionally

[1] Diseases of the Nose, 1890, p. 235.

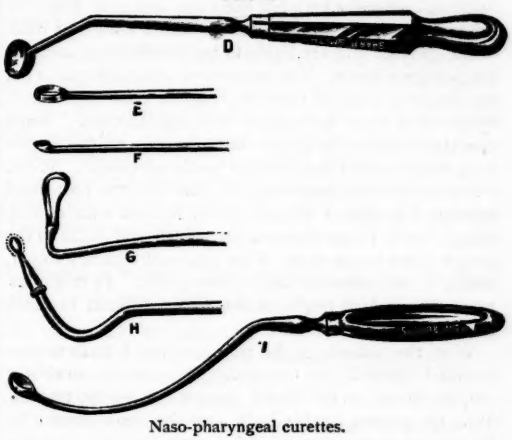
found the syrup of the iodide of iron of value, particularly in anæmic children. Other preparations of the iodides will doubtless prove beneficial in a few cases, and the chloride of calcium might cause some reduction of the gland in other instances; but, as a rule, medicinal treatment is of no value. Locally, astringents have been recommended, and seem to be useful in a few cases.

The most satisfactory results follow the removal of the gland by surgical measures. In a few cases in which the friends have objected to an operation, I have employed chromic acid successfully. In using this caustic I fuse a few crystals on the end of a flat aluminum probe, and pass this through the nostril to the enlarged pharyngeal tonsil, where it is held for two or three seconds. The nares must be previously oiled to prevent the contact of any of the acid with the mucous membrane, and a small amount of cocaine may be applied to the nares and naso-pharynx in the form of either powder or spray. Applied in this way the acid usually causes a moderate amount of pain at the time and some soreness for several hours afterward, but the pain is not severe. The applications may be repeated at intervals of from three to five days, being made alternately through the opposite nostrils. The galvano-cautery may be used by means of a bent electrode passed up behind the alate, or a straight one through the naris, but the method is painful, tedious, and not very satisfactory. Scraping off the gland by means of a long finger-nail, or by various forms of curettes (Fig. 1) is in favor with some operators, and may in certain cases serve an excellent purpose; but usually the operation is less complete than when performed by Loewenberg's forceps, and, therefore, recurrence is more likely to take place. Écrasement by means of a bent snare has been practised satisfactorily in some cases in which the growth was very soft. Some operators prefer scissor- or punch-like forceps, but both are open to objections and do not seem to me to compare with the Loewenberg forceps (Fig. 2). The scissor-like instruments which I have seen may be satisfactory for cutting out a soft portion of the mass, but they are not well adapted to a complete extirpation of the growth, and other instruments will generally have to be used if the diseased mass is completely removed. The punch-like forceps are not open to this objection, but it is claimed that much more bleeding results from their use than from the instrument about to be described. By far the most satisfactory inst rument for the operation is Loewenberg's forceps, or some of its modifications. The modification of this instrument, suggested by John N. Mackenzie, of Baltimore, has proved most satisfactory to me, though I have had made a similar instrument with shorter blades for operating upon young children; these two answer the purpose perfectly.

In performing this operation upon adults it is often sufficient to anæsthetize the parts by cocaine, which may be applied by an atomizer, syringe, or swab, or by means of a hypodermic syringe with a bent needle, by which it may be injected directly into the gland. My own custom has been to apply a ten-per-cent. solution as a spray behind the palate, and a similar solution by means of a syringe with a long nozzle to the upper part of the gland through the nares.

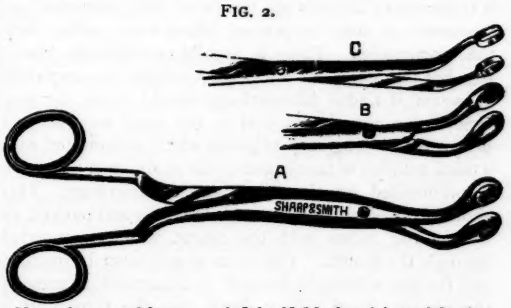
The application should be repeated about once a minute until the part is anæsthetized, or in about ten minutes. A self-retaining palate retractor should then be inserted, and the patient may depress his tongue with a depressor. The forceps are then inserted with the aid of a rhinoscopic mirror, and thus one or two bites may be made accurately, but subsequently the blood obstructs the view and the remainder of the operation may be postponed to another sitting, or completed by the sense of touch if the patient will permit. Usually, even with cocaine, after two or three bites have been made, patients prefer to postpone the remainder of the operation. Two or three sittings, however, will be sufficient in the majority of cases. When an anæsthetic is

FIG. 1.



Naso-pharyngeal curettes.

FIG. 2.



Naso-pharyngeal forceps. *A.* John N. Mackenzie's modification of Loewenberg's forceps; *B.* Loewenberg's forceps; *C.* Cutting forceps.

objected to, either in adults or children, if the gland is soft, and if for any reason a perfect operation will not be permitted, a single large bite should be made, as it will give very great relief. In children chloroform or ether should be administered, chloroform being preferable. When anæsthesia is complete the child should be turned upon its abdomen and face, with its mouth over the side of the table, and a gag should be inserted to hold the teeth apart. Henrotin's gag is the simplest one for this purpose which I have seen, but sometimes Goodwille's will be found preferable, especially in large children. The surgeon, standing at the right side of the table and facing the patient's head, passes the index finger of his left hand behind the palate into the naso-

pharynx, where it is retained as a guide to the forceps. The forceps are then passed along the dorsal aspect of the finger and accurately applied to the growth. Thus the gland is removed piece by piece, the forceps being guided each time by the finger until every part has been extirpated. Care should be taken to avoid seizing the posterior edge of the vomer or the ends of the Eustachian tubes. The latter often seem to the uneducated finger like abnormal growths. If care is taken not to turn the forceps sideways there is no danger of doing damage, providing the operator is familiar with the normal condition of the parts. Sometimes masses are situated just back of the Eustachian orifices and are liable to be overlooked, but the most common difficulty arises from small pendant masses which hang just back of the choanæ and are liable to be crowded forward into the posterior nares. It is sometimes quite difficult to get the finger in front of these in order to push them back where they may be caught with the forceps. Some operators attempt to scrape them away with the finger-nail, but the effort can be only partly successful. When I find difficulty in removing this part with the post-nasal forceps, I employ a straight nasal forceps with cutting edges, which I pass through the nostril and guide to the proper point in the vault of the pharynx with my finger, which is still retained behind the palate. In this manner a piece which might otherwise be difficult to catch is very readily removed.

With the patient in the position that I have recommended there is no necessity for care in swabbing out the throat, as the blood cannot run *up* the trachea. With the patient on his back and the head thrown far backward, as recommended by some English surgeons, it is necessary to swab out the throat and naso-pharynx frequently in order to prevent blood from getting into the air-passages. There is usually considerable bleeding, but this stops as soon as the operation is completed. However, if undue hæmorrhage should occur, the posterior nares may be packed in the usual way, or, as I prefer, with a long strip of gauze which is saturated with a thick solution of tannic and gallic acids, such as I have recommended for checking nasal hæmorrhage. This should be pushed back through the naris and packed up behind the palate with the finger, which is inserted through the mouth. The nares should also be packed and the gauze brought forward to the nostril, to prevent the packing from falling down into the throat. If it should become necessary to plug the naso-pharynx, the packing should be removed from within twelve to twenty-four hours.

When the operation is completed the mouth should be wiped out and the nostril squeezed to press out as much blood as possible, but it is neither necessary nor desirable to wash out the parts. The patient should then be placed in bed and the friends directed to keep him as much as possible upon the face till he has thoroughly recovered from the chloroform. He should be kept in bed for a few hours, and in the house for from two days to a week, according to the weather. During this time I usually direct that insufflations be made, two or three times during the day, of a powder composed of 2 per cent. of cocaine, 50 per cent. of iodol, and 48 per cent. of sugar of milk. A simple detergent alkaline spray is not objectionable, but washes should be avoided for fear of injuring the middle ear; even sprays will sometimes find their way up the Eustachian tubes, and, therefore, unless, judging from the odor, there seems to be a special indication for them, I prefer to use simply the powder.

As the result of the operation there is usually a little soreness of the parts for a day or two, but not sufficient to interfere much with swallowing. There is sometimes a slight elevation of temperature. The improvement in breathing is marked and immediate in many cases; very often the friends become alarmed during the first night, because the child breathes so quietly. In cases with deafness, considerable improvement or a cure of this symptom may be expected within a few days or weeks, but alterations of the voice are less rapidly recovered from. Some danger of otitis media exists from the liability of blood or other fluids to pass into the Eustachian tube, but thus far no permanent bad results have come from it in my experience. If the accident occurs, continuous use of hot water in the ear, or hot water with glycerin and opium, and dry heat externally, are the best remedies that can be employed. In some cases nasal obstruction will be found to persist, and it must subsequently receive appropriate treatment.

The results of this operation are the most satisfactory of any that I have seen in the domain of special surgery. In cases in which the operation is needed—and in no others should it be recommended—the patient's general condition undergoes a revolution for the better which often astonishes even the physician, and gives the friends most unbounded satisfaction. It is not unusual for a child of from three to six years of age to gain from twenty per cent. to twenty-five per cent. in weight within five or six months after the removal of the gland. I have never seen ill results follow the operation, and think it safe to tell the friends that when properly done it is no more dangerous than is the removal of a finger.

MEDICAL PROGRESS.

New Method of Dressing the Chest in Pneumonia and Pleurisy.—DR. WILLIAM HUNT (*Annals of Gynæcology and Pædiatry*, February, 1891) gives the following directions for treating the chest-walls in pneumonia and pleurisy:

If there is to be any cupping or other preliminary operation, have that attended to; then all the ingredients wanted are pure collodion and absorbent cotton in smooth layers, and a good broad brush like a mucilage brush.

Apply a very thin layer of cotton over the affected side, from spinal column to sternum, and secure it with collodion smeared thoroughly over it. Then go on with thicker layers, securing them with collodion until a good padding is obtained, paying particular attention to the edges. In double cases the dressing may encircle the chest. The advantages are:

1. The one dressing, if well applied, will last throughout the case, and hence,

2. The fatigue and discomfort of frequent poulticing are avoided.

3. The side, in unilateral cases, is held as in a splint,

while the free side does the breathing. A first-class non-conductor is covering the chest. The contracting collodion may have some influence in controlling the blood-supply.

4. There is no particular interference with physical examination, to one who has a good ear. May be it would be a good thing if there was; for, having once made the diagnosis, what is the use of exhausting the patient every day by trying to find out whether one-eighth of an inch, more or less, is involved? The general symptoms will tell that.

Prescriptions for Constipation of Pregnancy.—The following prescriptions are given by the *Revue Général de Clinique et de Therapeutique* for this condition:

℞.—Rhubarb . . . . 2½ drachms.
Boiling water . . . 4 ounces.

Make into an infusion and add carbonate of magnesium 2½ drachms, and manna 1 drachm. Order a tablespoonful of this every hour.

℞.—Phosphate of sodium . . 6 drachms.
Distilled water . . . 4 ounces.
Syrup of raspberry . . 6 drachms.

A dessertspoonful of this may be given every half hour or hour.

Finally, if acidity of the stomach exists, the following may be given:

℞.—Calcined magnesium . 2½ drachms.
Manna . . . . 1 drachm.
Distilled water . . . 8 ounces.

A tablespoonful every hour until a purgative effect is produced.

Cantharidal Collodion.—The following method of preparing cantharidal collodion is noted by the *Revue General de Clinique et de Therapeutique:*

℞.—Cantharidin . . . 15 grains.
Castor oil . . . . 1½ ounces.
Acetone . . . . 1½ "
Tincture of cannabis indica 2½ drachms.
Collodion . . . . 1½ pints.

The cantharidin is to be powdered and dissolved in the castor oil with the aid of heat. After it is cooled the acetone and the collodion, and finally the tincture of cannabis indica, are to be added.

Anæsthetic Mixtures.—The following formulæ for the preparation of the anæsthetic mixtures, are given in the *Medicinische-chirurgische Rundschau.* The A. C. E. mixture, according to this journal, is made by taking:

℞.—Alcohol . . . . . 1 part.
Chloroform . . . . . 2 parts.
Ether . . . . . 3 "

Another method of making it is to use:

℞.—Alcohol and ether . . . 1 part.
Chloroform . . . . . 3 parts.

With some the anæsthetic mixture is made by adding 4 parts of chloroform to 1 part of alcohol.

Powder for Acute Eczema.—*La Semaine Médical* gives the following prescription of Alexinski for this condition:

℞.—Oxide of zinc . . . 15 grains.
Subnitrate of bismuth . 30 "
Powdered starch . . 1½ drachms.
Powdered lycopodium . 1½ "

This powder is to be dusted over the parts which are affected, night and morning.

Aristol for Fissured Nipples.—VINAY, in *Lyon Médical,* has recommended the employment of aristol in the treatment of fissured nipples occurring during lactation. He uses it in cases in which there is much ulceration and pain. The mixture is as follows:

℞.—Aristol . . . . . 1 drachm.
Liquid vaseline . . . . 5 drachms.

This is to be applied to the breast and carefully wiped off before the child nurses. After its employment the pain diminishes and cicatrization goes on rapidly. In cases in which the glands become much involved this preparation of aristol may be rubbed into the enlargements with advantage.

Cystitis in Women.—The *Journal de Médecine de Paris* gives the following prescription for cystitis in women:

℞.—Citrate of potassium . . . . ½ ounce.
Fluid extract of triticum repens } of each 1 "
Tincture of belladonna }
Fluid extract of buchu . . . ½ "
Water, a sufficient quantity to make 4 ounces.

A teaspoonful in a wineglassful of water three times a day.

Treatment of Diphtheria by Mercurial Inunctions.—In *La Semaine Médical* SMAKOVSKI states that he has employed frictions of mercurial ointment in a number of cases of diphtheria with great success. The inunctions are continued until marked evidences of mercurialism are present, and it may even be necessary to use a mouth-wash of chlorate of potassium in order to prevent salivation. This treatment, of course, is identical in its effects with the exceedingly common method of using calomel or bichloride of mercury in this disease for the purpose of decreasing the quantity of the plastic exudate.

The Treatment of Metrorrhagia in Childbed.—BRAUN states that in cases of metrorrhagia occurring within sixty hours of parturition it is necessary that we should determine the condition of the uterus. If it is not firmly contracted energetic pressure should be made at once upon the fundus, and all clots removed from the vagina by the finger. If the hæmorrhage persists and continues after pressure upon the uterus, it is well to introduce a piece of ice into the vagina. If grave symptoms arise from the hæmorrhage, 1 or 2 drachms of fluid extract of ergot with 20 drops of the tincture of nux vomica may be given, and repeated in half an hour if the uterus has not contracted. Cold should be applied to the belly and used by vaginal injections. Internally it may be well to administer rum or strong wines.—*L'Union Médical.*

CURRENT LITERATURE.

SATURDAY, MARCH 21, 1891.

THE SUSPENSION TREATMENT IN LOCOMOTOR ATAXIA AND OTHER NERVOUS DISEASES.

JULIUS HESS gives a very thorough review of the suspension treatment and its literature, from 1883, when it was incidentally discovered by Motschukowsky, to the present. He, himself, has employed the treatment in eighteen cases; five of these were cases of locomotor ataxia, and eight of neurasthenia, the remaining five consisting of one case each of old neuralgia, spinal muscular atrophy, gastralgia, hypochondria, and cerebral syphilis. Three hundred suspensions were given, one patient, who had locomotor ataxia, receiving as many as eighty. The duration of the suspension at first was from one-half to one minute, and later, four minutes. Some patients were suspended every day, others every other day, and still others at irregular intervals. Pretty full abstracts of his cases are given. The patients affected with locomotor ataxia were not improved, or at least only temporarily. In the majority of the cases of neurasthenia no result was obtained. The remaining patients were either only improved transiently or were made worse. Hess admits that the experience of others has, for the most part, been more favorable, and that other methods have no better effect upon progressive locomotor ataxia. The method of suspension is convenient and time-saving, and, in the hands of a physician who chooses his cases properly and has suitable apparatus, it is not dangerous.—*Berliner klinische Wochenschrift*, February 2 and 9, 1891.

TREATMENT OF PNEUMONIA WITH LARGE DOSES OF DIGITALIS.

PROFESSOR Z. PETRESCO, of Bucharest, delivered a lecture on this subject before the Section of Internal Medicine at the last International Medical Congress. He refers to his previous remarks and to the writings of a number of others on the same subject. He uses an infusion of 60 grains of digitalis leaves to six ounces of distilled water, to which about an ounce of syrup of orange-peel is added. The digitalis is allowed to steep for a half-hour. A tablespoonful of this mixture is given every half-hour. Petresco says that doses of this size are well borne, and that he has never met with a case of poisoning, his results differing in this respect from those of other physicians. He maintains that these doses are therapeutic, not toxic, and that the absence of toxic symptoms is not due to the use of an inferior digitalis leaf. Satisfactory proof of the latter statement is furnished by giving the sources of the supply and analyses showing the strength of the leaves. Digitalis leaves infused for fifteen minutes yield to the water digitonin, digitalein, and digitalin; digitoxin does not pass into this infusion. The urine of twenty-three patients was examined, both during and seven days after treatment, and only digitalein could be detected.

The best results were obtained in fibrinous or croupous pneumonia. The results in infectious pneumonia are explained principally by the hyperkinetic, antipyretic, and antiphlogistic action of digitalis; in such cases it was used together with antiseptics. Digitalis has also been very useful in pneumonias complicated with bronchitis and pleurisy, and especially in cases associated with heart disease. Petresco declares that he has observed cases of true croupous pneumonia undoubtedly aborted by digitalis used in the way he describes. In from twenty-four to forty-eight hours, the time necessary for the development of the action of digitalis, a sudden fall of temperature from 102°, 104°, or even 106°, to 98.4°, 97°, or even 95°, has been observed. This fall of temperature was accompanied by a corresponding decrease in the frequency of the pulse and respiration, and by the usual symptoms of convalescence.

No effect upon the digestive tract was observed, except the occasional production of vomiting, which occurred especially in apical pneumonias.

The greatest and most persistent changes were noticed in the pulse, which became slow, powerful, and of high tension. Irregularity or intermittency of the pulse were never observed. A number of sphygmograms are reproduced, showing the transformation of a frequent, weak, often dicrotic pulse, of large volume, into a slow, strong, small pulse, of high tension. Petresco does not regard digitalis as a diuretic, because it exerts no direct action upon the kidneys. In dropsy of cardiac origin digitalis produces an increased flow of urine by improving the general condition of the patient. Petresco has treated pneumonia according to the expectant plan, with emetics, alcohol, bromide of potassium, caffeine, strophanthus, and convallaria, and he compares the results obtained in these cases with the results obtained by the use of large doses of digitalis. His conclusion is that the latter plan possesses decided superiority. He also quotes statistics from Jaccoud showing the mortality attending the treatment of pneumonia by bloodletting, tartar emetic, and alcohol, and that attending the expectant plan of treatment. The highest mortality (34.50 per cent. in 698 cases) occurred under employment of bloodletting, and the lowest (3 per cent. in 129 cases) under the use of tonics, alcohol, etc. In contrast with these, Petresco places the mortality statistics at the *Central Militärlazareths*, in Bucharest, which are as follows: From 1883 to July 1, 1887, there were 577 cases with a mortality of 1.21 per cent.; to January 1, 1889, 816 cases, with a mortality of 2.06 per cent.; and up to the time of his report there had been 825 cases, with a mortality of 2.06 per cent.

His general conclusions are as follows:

1. Digitalis has a direct antiphlogistic action only in therapeutic doses.

2. The specific therapeutic dose is from 60 to 120 grains of the leaves, given as an infusion, within twenty-four hours.

3. This dose may be continued from two to four days according to the severity of the cases treated.

Patients have received in the course of their disease from 300 to 360 grains in four or five days, without symptoms of nausea or poisoning. The temperature fell from one to three degrees after single doses, and five or six degrees after two or three doses. The pulse fell from 40 to 60 beats after several doses. This reduction of the frequency of the pulse and of the temperature lasts ten or twelve days, and then they gradually become normal.

4. Disappearance of all local symptoms of the pneumonia is observed simultaneously with the improvement in the circulation and respiration.

5. The effectiveness of the treatment is confirmed by the statistics, the mortality being least under large doses of digitalis.

6. The applicability and harmlessness of the therapeutic dose are incontrovertibly proved by cases reported in full by Petresco's pupils—Brailov, Sacliano, Antoniu, and Constantinesco.

7. Comparative study of the various methods of treatment of pneumonia has persuaded Petresco that the expectant plan is not only irrational, but even dangerous. The supposition that pneumonia must run its course is not justified. Pneumonia may be aborted, especially if attacked at the beginning.—*Therapeutische Monatshefte*, February, 1891.

DIFFERENTIAL DIAGNOSIS BETWEEN ULCER AND CANCER OF THE STOMACH.

KOLLMAR says that in the great majority of cases the diagnosis between ulcer and cancer of the stomach is easily made, but that in not rare cases it may be difficult. In some cases the course of ulcer of the stomach is without striking symptoms, and the disease is perhaps first discovered at the autopsy, or makes its presence known by sudden profuse hæmatemesis or by a perforative peritonitis. Cancer of the stomach may also exceptionally exist without peculiar characteristic symptoms, the only symptoms being a steadily progressing marasmus and profound cachexia, without any other recognizable cause. Usually, however, pronounced digestive disturbances, pain in the region of the stomach, and vomiting, with or without admixture of blood, point with certainty to serious disease of the stomach; but whether it is ulcer or cancer must be determined by other considerations.

The points to be considered in the differential diagnosis of the two diseases are, the age of the patient, the character of the pain, the character of the bleeding, the degree of acidity of the gastric juice, the duration of the disease, the condition of the nutrition of the patient, and the presence or absence in the gastric region of a palpable tumor.

As regards age, gastric ulcer is most frequent between the ages of fifteen and twenty years; but it is not rare in old persons. Cancer of the stomach is most frequent between the fortieth and sixtieth years of life, eighty-two of Kollmar's one hundred and eighteen cases occurring during this period. Kollmar's statistics of one hundred and eighteen cases of cancer seen in the last twenty years at the medical clinic at Tübingen, give an average age of fifty years.

Localized pains, "wound pains," are characteristic of gastric ulcer, but they are not present in all cases, and are found in gastric cancer in the stage of ulceration. Diffuse pains, dyspeptic discomfort, and cardialgia, are common to both diseases. The pain in gastric cancer is usually less intense than that in gastric ulcer.

Hæmatemesis varies greatly in character and quantity in both, but generally profuse hæmorrhages are more frequent in ulcer.

Absence of hydrochloric acid from the gastric juice is not an absolutely certain sign of the presence of cancer. A negative reaction is obtained in some cases of amyloid degeneration of the gastric mucous membrane, in cancer of the duodenum and œsophagus, and in poisoning with acids; and the reaction is frequently negative in gastric catarrh, in atrophy of the gastric mucous membrane, and in persistent fever. A temporary absence is not rare in gastric catarrh and dilatation of the stomach. In the latter diseases the reaction may be obtained by repeatedly washing out the stomach. Kollmar reports a case of this kind. A decidedly positive reaction speaks with considerable but not absolute certainty against the diagnosis of gastric cancer; while a negative reaction, because it occurs in other diseases of the stomach, should at least not be regarded as characteristic of cancer.

The duration of the disease is of great importance in the diagnosis. Gastric ulcer runs a very chronic course, frequently lasting years; it may get well and subsequently recur. The course of gastric cancer is different, as it is very exceptional for it to last longer than two years, and usually death occurs much sooner. A preceding history of stomach trouble lasting for years, getting well for a time and then relapsing, is against the diagnosis of cancer even in old persons.

Cancer sometimes, but very rarely develops in the scar of an old ulcer. Kollmar has been able to find only fourteen cases of this kind reported in the literature upon the subject. Details of cases by Dittrich, Meyer, Lebert, Heitler, Platow, Rosenheim, and Kulcke are given. It is not reasonable, therefore, to pay too much attention to these exceptional cases in the diagnosis. Both ulcer and cancer may both be present in one patient.

An important diagnostic point is the condition of the patient's nutrition. Great and early emaciation and cachexia occur in the great majority of cases of gastric cancer, whereas in ulcer the nutrition is often relatively good. But when the ulcer has persisted a long time, and the stomach has become dilated, and frequent vomiting and hæmorrhages occur, the picture of the disease is very much like that of cancer.

A sign, surpassing all others in diagnostic importance, is a palpable tumor in the stomach region, which is almost always present in cases of cancer. It may be simulated by scar tissue about an ulcer, by a sacculated peritoneal exudate, by an hypertrophied pylorus, or by a tumor of a neighboring organ. In such cases watching for the growth of the tumor leads to a correct decision, though in some cases increasing atrophy of the abdominal

walls, by making the tumor more readily palpable, has made it appear to grow larger. Reinhard has collected sixteen cases of simple ulcer of the stomach with tumors. In six cases the tumor was caused by an hypertrophied pylorus from cicatricial stenosis; in six it was the result of adhesions between the stomach and other organs, caused by the ulcer, and in part also by encroachment of the ulcer itself upon these organs; in three cases there were foreign bodies in the ulcer; and in one case an encapsulated abscess. All the sixteen patients were of an age at which cancers are common; thirteen were women and three men. A tumor of the head of the pancreas may lead to error. In such cases as Reinhard's, the duration of the disease is a great aid in the diagnosis.

Kollmar concludes his paper by reporting three interesting cases. In the first case, a woman forty-eight years old had suffered from gastric ulcer for thirteen years. Subsequently a marked tumor and severe cachexia appeared, so that it was supposed that a cancer had developed. The autopsy revealed a gastric ulcer, but no cancer was found. The second case was that of a woman forty-six years old who had had disease of the stomach for twenty-three years. A diagnosis of gastric ulcer was made in spite of the presence of the gravest cachexia, a decided tumor, and the absence of hydrochloric acid in the gastric contents. This diagnosis was confirmed by the autopsy. In the third case, a woman fifty-three years old, with the gravest anæmia and cachexia, had had disease of the stomach for a great many years. The diagnosis was gastric ulcer without carcinoma, and was confirmed by autopsy.—*Berliner klin. Wochenschrift*, February 2 and 9, 1891.

MERCURIAL STOMATITIS.

IN writing upon the subject of mercurial stomatitis FOURNIER[1] claims that every time that mercury is administered it is at the risk of developing stomatitis. All the mercurial compounds, however, are not equally dangerous in this respect, and the mode of administration also has a bearing upon the production of stomatitis. The administration of mercury by inunctions is the mode which predisposes most markedly to this complication. If properly made—that is, not extending the application over a longer space of time than ten minutes, or using a larger amount than one drachm—inunctions are generally well borne; notwithstanding, it is necessary to watch the gums. If used in larger amounts than one drachm, even one and a half drachms *per diem*, salivation is apt to occur. This stomatitis is abrupt in appearance, and is more intense at first than that which follows the administration of the drug by the mouth. Fournier claims that the hypodermic injection of mercury, which was formerly believed to be free from the danger of producing salivation, is usually followed by disastrous effects within a few days.

There are certain conditions favoring the appearance of stomatitis during the administration of any of the preparations of mercury. Among these are *idiosyncrasy* and *a bad state of the mouth*, with a tendency to stomatitis. It is wise, therefore, to inquire into the history of the patient as to any susceptibility to mercury, and, in all cases, to make an examination of the mouth. The presence of the teeth is also a factor in the production of a stomatitis of this kind. Salivation never occurs in the newborn, nor does it occur in toothless old people. Workers in mercury mines suffer from frightful attacks of stomatitis until they lose their teeth, after which they have no further trouble. Sex, also, has a peculiar influence, women being much more susceptible than men to the effects of the drug. Denudation of the skin is a marked predisposing cause, and the dressing of vulvar mucous patches with a mercurial pomade has frequently resulted in an inflammation of the mouth. The genital surfaces are especially sensitive to the action of mercury, and a single inunction upon the scrotum may determine a stomatitis.

[1] La Médecine Moderne, January 15, 1891.

CANCER OF THE PANCREAS.

N. MUSMECI, in a paper entitled "A Contribution to the Pathology of Cancer of the Pancreas," says that it is often impossible to determine clearly cancerous degeneration. The rarity of this alteration in an organ the functions of which are so poorly understood, and which is in such close proximity to the stomach, the liver, the intestines, and other organs, renders a diagnosis with absolute precision most difficult. Musmeci, with great clearness, has drawn from his studies the following conclusions:

1. The diagnosis of cancer of the pancreas, in the majority of cases, is difficult; it frequently happens that the disease is confounded with neoplasms of other organs.

2. Diagnosis by exclusion is the best method in diseases of this organ in general, and in carcinoma in particular.

3. Jaundice in the beginning of the sickness, the presence of a tumor which corresponds in its location to the pancreas, the presence of fatty material in the fæces and of sugar in the urine, have a considerable supposititious force in the diagnosis of a cancerous affection.

4 The vicinity of the pancreas to the principal abdominal organs increases the liability of the transmission of the cancerous germs from one organ to another in the great majority of cases, and there is no method of ascertaining whether the alteration began in the pancreas, liver, stomach, or other abdominal viscera.—*Gazetta degli Ospitali*, Nos. 82 and 83.

NATURE, ETIOLOGY, AND TREATMENT OF SCROFULA.

SCROFULA was considered for a long time as a disease (Lugol) with a prodromal period which was designated the "scrofulous habitus." The course of the disease was divided into four periods: The first was characterized by the appearance of eczema, impetigo, nephritis, chronic coryza, otorrhœa, en-

larged tonsils, and acute suppurating adenitis. The distinguishing characteristics of the second stage were various affections of the skin and mucous membranes, followed by exuberant ulcers, and chronic suppurating cervical adenitis, leaving fistulæ and depressed cicatrices. In the third period were grouped cold abscesses, glandular enlargements, periostitis, hyperostoses, caries, necrosis, and "white swellings." The fourth period comprised diseases of the viscera, bronchial, pulmonary, and pleural tuberculosis, scrofulous lesions of the prostate, bladder, kidneys, testicles, ovaries, vertebræ, and brain, together with amyloid degenerations.

This theory has been entirely abandoned, owing to the advance in bacteriology and pathology during the past thirty years. To-day we recognize the scrofulous diathesis, a condition which predisposes to certain affections, such as the dermatoses and catarrh of different organs, which, however, are not specific, as was formerly believed. These different diseases do not at first present anything peculiar in their symptoms and development, but at length it will be noticed that their progress is not as frank as it should be, the inflamed parts become hypertrophied and tumefied, resolution not being complete. The disease has a tendency to become chronic, in which state the least cause gives rise to a subacute condition. There is thus established a predisposition which renders more easy the development of scrofulous diseases, catarrhs, inflammations of the skin and mucous membranes, which, by their repetition and chronic tendency, produce the so-called "scrofulous habitus." Associated with this diathesis there is thickening of the upper lip and alæ of the nose. There is, however, nothing specific in this condition. As to the causes of this diathesis: First, it is hereditary in the full meaning of this term—a scrofulous parent transmits the disease to his child. Second, the general condition of the parents at the time of the procreation of the child exerts an influence upon the nature of its tissues and their future nutrition. An aged, sick, or syphilitic father may engender a scrofulous child, while sickness, persistent vomiting, or hæmorrhages in the mother during gestation may have the same influence upon her offspring.

Again, the scrofulous diathesis may be acquired during the first months of a child's life, through bad hygiene or sickness. It may also be induced by an artificial or incomplete lactation, either because the nurse is too old or the milk too poor, or too rich in fats. Premature feeding of a child with coarse foods, and the gastro-intestinal diseases which result from it, with their attendant symptoms of vomiting, diarrhœa, acid fermentation, and intestinal or gastric dilatation, may also induce scrofula. An interesting fact, and one which is undeniable, is the close relation existing between joint affections and scrofula. The children of gouty and diabetic people, the most typical arthritics, are often scrofulous. These children are greatly predisposed during their first years to the same diseases as are the children of scrofulous people.

As regards treatment, it is necessary to improve the nutrition, and to favor tissue change. The hygiene of the mother should be looked after during pregnancy, a good nurse should be provided for the baby, and its feeding carefully attended to. Later, the baby's food should be selected with reference to the proportion of proteids and fats. The function of the skin may be maintained by dry frictions, salt and sulphur baths during the winter, and cold baths or douches during the summer. Sunlight, exercise in the open air, alternate sojourns upon the plains and in the mountains, avoidance of damp climates, and abstinence from alcoholic as well as stimulating drinks like coffee and tea, are essential in the treatment.

The drugs to be employed are the iodides, iodoform, arsenic, iron, and tannin, which should be used alternately.—GENDRE, in *Journal des Maladies Cutanées*, December, 1890.

TREATMENT OF CYSTITIS IN WOMEN.

ACCORDING to GAUBET (*Archives de Tocologie et de Gynécologie*, January, 1891), the treatment of cystitis in the woman comprises: 1. Urinary antisepsis; 2. Medical treatment; 3. Medico-surgical treatment; and lastly, true surgical procedures. An antiseptic condition of the urine is best produced by the administration of salol, which, under several experienced observers, has given excellent results. The borate of sodium, according to Terrier, has given rise to gastric troubles, while the benzoate of sodium and benzoic acid have been proven to be inefficient in producing the desired effect. Bazy having tried salol, found that the drug is very well borne, even by the most delicate and rebellious stomachs, in doses of one and a half drachms, although one-half to one drachm is generally sufficient. This occasionally, not always, causes a diminution in the pain and smarting during micturition. The elimination occurs generally on the first day, but may be delayed twenty-four hours, and it may continue during one or two days, and even more, after the stoppage of the drug. The cases in which salol acts most efficaciously are the purulent catarrhs of the bladder, and in such cases it should be given in doses of from fifteen to thirty grains. Salol does not act, however, to any appreciable degree upon suppurations of the urinary passages.

Antisepsis of the urinary passages, finally, is completed by observing perfect antiseptic measures in regard to the instruments which are used. Boiling water is generally sufficient to disinfect all metallic instruments. Should the bladder require washing out, it should be done with sterilized instruments; and the fluid used should be a solution of boric acid or of dilute silver nitrate. In patients in whom the entire organism has become infected, it is necessary to prevent the infection from becoming aggravated by suppressing the cause as far as is possible. This requires a careful investigation into the condition of the bladder, the ureters and the kidneys. Secondly, elimination of the poison by the natural emunctories should be facilitated; by the skin, through the aid of sudorifics; by the kidneys, by means of revulsives over the lumbar region and large quantities

of diluent drinks. It is also necessary to destroy the poison in the system by means of quinine, and to increase the resisting powers of the patient by the use of tonics. To repeat, antisepsis of the urinary passages comprises the administration of salol in half-drachm doses daily for two or three days before the operation, intra-vesical douches of boric-acid water (3 parts to 100), and the disinfection of the instruments employed.

The medical treatment of cystitis includes primarily injections of morphia. Barley-water, linseed tea, and other diuretics will calm the pains attendant upon micturition, by freeing the urine from its irritating properties. The mineral waters have little action in the treatment of painful cystitis. Rest is an important element in the management of these cases. Opium, chloral, bromide of potassium, and belladonna should be given for the pain, and purgatives and enemata for the relief of the constipation.

SOCIETY PROCEEDINGS.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, February 2, 1891.

THE PRESIDENT, WILLIAM HUNT, M.D., IN THE CHAIR.

DR. THOMAS G. MORTON reported

THREE CASES ILLUSTRATING THE RESULT OF TREATMENT OF EQUINO-VARUS.

The speaker said that the cases illustrated those forms of equino-varus which he has designated as "complicated" and "uncomplicated" equino-varus. In the complicated equino-varus the foot cannot be brought to a right-angle with the leg, because the astragalus is displaced forward and more or less rotated, and in this position forms a wedge in front of the joint and so prevents flexion of the foot; in all such cases the displaced bone must be removed. In "uncomplicated" equino-varus the tarsus is almost or quite normal, the distortion resulting from contraction of the soft parts. In these cases massage, traction, and tenotomy will overcome deformity, after which the child is able to walk with the aid of appropriate apparatus.

CASE I.—Emory W., aged four years, was brought from Bedford County, Pa., to the Orthopædic Hospital, November 11, 1890, with very marked deformity and great rigidity of both feet. General tenotomy had been performed during the patient's infancy without benefit. On examination the equino-varus was found to be of the complicated variety—displacement forward with rotation of the astragalus. There was considerable atrophy of both extremities. The astragalus of each foot was excised on November 18th. The tendo Achillis and flexor tendons of the toe were divided. No vessel required ligation. Catgut was used for drainage. Right-angled tin splints and the usual dressings were employed. Walking-shoes were applied January 13th, and on January 25th his feet were in excellent position and he walked well.

CASE II.—Harry Z., aged three years, was admitted to the Orthopædic Hospital, January 15, 1891, with marked double equino-varus. Tenotomy had been performed in infancy. Examination showed no displacement of the astragalus, the distortion being entirely due to contraction of the soft parts of the feet.

General tenotomy was performed January 22d, the anterior and posterior tibial tendons, the flexor tendons of the toes, and the tendo Achillis of each foot being cut. The feet were placed in right-angled posterior tin splints, and the dressing allowed to remain undisturbed for two weeks, when the wounds were found completely healed. The club-foot walking-shoes were applied at this time and gave satisfactory results.

CASE III.—Annie S., aged eleven years, was admitted to the Orthopædic Hospital, November 29, 1890, with talipes equino-varus of the left foot. Tenotomy had been performed in early infancy without benefit.

On examination the tarsus was found normal, the distortion being due entirely to contraction of the soft parts.

On December 4th the tendo Achillis was divided and the foot readily brought to a right-angle with the leg. The varus was then overcome, and after section of the anterior and posterior tibial tendons the foot was spread out, after which all of the flexor tendons of the toes were divided. A right-angle tin splint and the usual dressings were applied to the foot. The position of the foot was excellent. An ordinary walking-shoe was applied January 15th.

DR. J. H. PACKARD said in discussion: "I desire to mention in this connection a case of talipes under my care at the Pennsylvania hospital. The patient is a Russian Jew, about twenty-five years of age. The distortion was so great that he was compelled to walk on the back of his foot. I did the operation described by Dr. Morton, dividing subcutaneously the tendo Achillis and the tendon of the anterior and posterior tibial muscles and removing the astragalus. The plantar fascia and all the flexor tendons of the toes were also severed. The foot is now in a much better position. One point to which I would call special attention is that the foot is now set further forward on the leg than normally. Instead of the weight of the body coming on the arch, it will come on the posterior abutment of the arch. There will be no spring to the gait, and the man will walk as if he had a flat foot. I do not know whether it would have been possible to avoid this condition in the treatment. The improvement in the appearance of the foot is marked, and the gait will probably be equally improved."

DR. H. AUGUSTUS WILSON said: "I hoped to have a case here this evening which I think is a proper one for the operation advocated by Dr. Morton. There are, however, in this case unfortunately several serious complications, such as spina bifida, complete sensory paralysis of one side and partial on the other, with sloughing bursitis of both feet. It has been almost impossible to stop the suppuration in the bursæ. An incision which was made six weeks ago in the foot where the anæsthesia was most marked, as yet shows no tendency to heal. It seems probable, therefore, that any extensive operation would be followed by slow healing. The spina bifida is gradually diminishing in size, being now only half as large as it was six months ago. I hope that someone can inform me as to the possibili-

ties of an open wound in a part where there is such profound anæsthesia."

DR. THOMAS G. MORTON said that "occasionally we find in adults severe and painful distortion of the foot with atrophy where the usual operative measures cannot be considered, and amputation is the only resource.

"A young woman, aged twenty-six years, with a congenital equino-varus of the right foot, was admitted to the Orthopædic Hospital last December. The limb was greatly atrophied, the circulation was very defective, and three toes had sloughed off at different times, apparently from very trivial injuries. The patient had great difficulty in walking, was very lame, and suffered much pain.

"Under the circumstances, I considered an operation to correct the deformity unjustifiable. A Teale amputation was performed, being followed by slow union of the flaps, but no suppuration."

DR. J. H. PACKARD then showed specimens of

SEPARATION OF THE EPIPHYSIS OF THE FEMUR,

taken from a boy nine years of age who was brought to St. Joseph's Hospital in April, 1889, having had his leg caught in the wheel of a carriage behind which he was clinging. At first sight the appearance was that of a luxation of the knee. A closer examination, however, showed an oblique wound across the posterior part of the knee-joint, the diaphysis of the femur, stripped of its periosteum, presenting. The epiphysis was turned over on top of the diaphysis and held in that position by the heads of the tense gastrocnemius muscle. The patella was not materially displaced, being still in relation with the joint, but was tilted up by the action of the quadriceps muscle. The vessels had not been torn, but had slipped around the end of the diaphysis, the blood in the artery being coagulated, so that there was a probability of the limb becoming gangrenous. The damage to the soft parts was so extensive that an attempt to save the limb was not considered proper. Amputation was therefore performed, about an inch and a half of the shaft being removed. The boy made a perfect recovery.

There are several interesting points in connection with separations of the epiphysis of the femur. In the first place this epiphysis is unlike all the others in regard to the mechanical disadvantage at which it is placed. The speaker has collected sixty-eight cases of this injury. There is often a tearing-off of a small portion of the diaphysis. In the case just described there is an extremely small portion of the diaphysis torn from the inner side of the shaft, which does not, however, alter the character of the injury. Separation of the epiphysis is not at all analogous to fracture of the femur, although it might simulate a fracture in cases in which there is a separation of a large splinter of bone. This might resemble fracture low down in the femur. In a fracture of this kind there is crepitus. The deformity is easily reduced and does not recur, but in cases of separation of the diaphysis there is no crepitus, because there is no contact between the separated portions of bone. In almost all, even the simple cases that have required operation, or when an examination has been made shortly after the accident, the periosteum has been found stripped from the surface of the shaft. The reason for this is plain. During extreme extension the epiphysis is strongly held by the ligaments; then when separation occurs there is violent thrusting downward of the diaphysis through a sort of button-hole in the periosteum, which is thus stripped off. In one case the periosteum is said to have been torn off as high as the trochanter. A distinguished French surgeon advises in these cases that the shaft of the femur be resected to a point as high as the separation of the periosteum. If this were carried as high as the trochanter, it would of course make the limb useless. If reduction is possible, the periosteum soon becomes re-adherent, and the nutrition of the bone is not materially interfered with.

Amputation has been done in twenty-eight of the sixty-eight cases reported. In a number of cases there were other injuries causing death in a short time, and in many others the diagnosis was not satisfactorily established. The speaker thought this was the twenty-seventh instance in which the accident was produced by catching the leg in a carriage-wheel. One case was recently reported by Owings in the *New York Medical Journal* in which amputation was not required. The difficulty in reducing the epiphysis, due to the contraction of the heads of the gastrocnemius, could be relieved by dividing the heads of the muscle. Whether the case would do well with a large open wound and section of the muscle, he could not say. In this case there certainly would have been difficulty in keeping the bone in position without resection.

In discussion DR. JOHN H. BRINTON said that he had a specimen almost identical with that shown by Dr. Packard. The accident occurred in 1881 in the practice of Dr. Davison, of Bradford County, Pa. In the paper describing the case is the following account: "The patient was a boy twelve years of age, who, while riding on the back of a rapidly-moving wagon, caught his left foot between the spokes of the wheel. The foot was then carried to the front of the hub, and the popliteal region was violently strained between the sharp edge of the hub, the axle-shoulder, and the under cross-brace of the wagon. The patient was seen a few hours after the accident. There was an oblique wound, four or five inches long, extending across the upper part of the popliteal space; the skin, superficial fascia, and muscles were severely lacerated, and there was copious hæmorrhage, supposed at the time to be venous. The wound was dressed and the parts brought together by sutures. The diagnosis was obscure; there was vague crepitus, and the accident was believed to be a fracture of the femur near and perhaps into the knee-joint. On the following day the limb was cold, and there was still no pulsation in the artery. In four days gangrene set in, and the limb was amputated three or four inches above the knee-joint. Careful dissection showed that the epiphysis had been completely torn from the diaphysis, and the popliteal artery was injured so that a probe could with difficulty be passed through. There was also a rupture in the posterior portion of the synovial membrane of the knee-joint. The patient made a good recovery."

NEWS ITEMS.

Illinois State Board of Health.—The Illinois State Board of Health has decided that hereafter it will recognize no foreign diploma that does not confer the right to practise medicine in the country in which it was granted. The holder of an Austrian, a German, Russian, or Swiss

diploma, wishing to practise in Illinois, must hereafter pass an examination before the State Board, unless he has passed the State examination of the country from which he comes. The holder of a Canadian diploma, unless a licentiate of the Colleges of Physicians and Surgeons of Ontario and Quebec, must pass an examination before the Illinois Board in order to practise in Illinois.

Hypnotism in Public Forbidden.—The first official suppression of a public hypnotic entertainment in this country occurred at Cincinnati, where the Health Commissioner, Dr. J. W. Prendergast, advised the licensing authorities of that city that hypnotic exhibitions should be forbidden. Dr. Prendergast takes the ground that the indiscriminate application of hypnotism is in a large proportion of cases injurious to the mental health of the subjects. The Common Council has interdicted these exhibitions, and adopted an ordinance making them a misdemeanor.

Congress of Hygiene and Demography.—The aim of the Congress is to awaken public interest in the progress of hygiene and demography—by the latter term being understood the study of the life conditions of communities from a statistical point of view; to afford persons interested in these subjects an opportunity of meeting one another, with the object of advancing their progress; and, by conferences and debates, to elucidate questions relating to hygiene, demography, and public health.

The Congress will be held in London, August 10 to 17, 1891.

The Governments of all countries, municipalities, county councils, and other provincial administrations, public health authorities, universities, colleges, and all societies which are occupied in the study of the sciences more or less immediately connected with hygiene, are invited to coöperate and appoint delegates to represent them at the Congress. An exhibition of articles of hygienic interest will be held in connection with the Congress. Excursions will be arranged to various places of especial interest to hygienists.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 8 TO MARCH 16, 1891.

By direction of the Acting Secretary of War, WILLIAM C. SHANNON, *Captain and Assistant Surgeon*, now on duty at Fort Apache, Arizona Territory, will repair to this city and report in person to the Adjutant-General of the Army for further orders.—Par. 3, *S. O. 55, A. G. O., Washington*, March 11, 1891.

By direction of the Acting Secretary of War, HENRY I. RAYMOND, *Captain and Assistant Surgeon*, is relieved from duty at Newport Barracks, Kentucky, and assigned to duty at Fort Thomas, Kentucky, reporting in person to the commanding officer Fort Thomas, and by letter to the commanding general Division of the Atlantic.—Par. 18, *S. O. 54, A. G. O., Washington*, March 10, 1891.

FINLEY, JAMES A., *Captain and Assistant Surgeon*, having been found, by an Army retiring board, incapacitated for active service, on account of disability which is not the result of any incident of service, is, by direction of the President, wholly retired from the service this date, under the provisions of Sections 1252 and 1275, Revised Statutes, and his name will be henceforward omitted from the Army Register.—Par. 2, *S. O. 54, A. G. O., Washington*, March 10, 1891.

By direction of the Secretary of War, a Board of Medical Officers, to consist of EDWARD P. VOLLUM, *Colonel and Chief Medical Purveyor*; DALLAS BACHE, *Lieutenant-Colonel and Surgeon*; ALFRED C. GIRARD, *Major and Surgeon*; and CHARLES M. GANDY, *Captain and Assistant Surgeon*, is constituted to meet in New York City, on March 16, 1891, or as soon thereafter as practicable, for the examination of candidates for admission into the Medical Corps of the Army, and such other business as the Surgeon-General may desire to bring before it.—Par. 18, *S. O. 52, A. G. O., Washington, D. C.*, March 7, 1891.

RETIREMENT.

FRYER, BLENCOWE E., *Lieutenant-Colonel and Assistant Medical Purveyor*, February 24, 1891.

PROMOTIONS.

GREENLEAF, CHARLES R., *Major and Surgeon*, to be Lieutenant-Colonel and Assistant Medical Purveyor, February 24, 1891.

WINNE, CHARLES K., *Captain and Assistant Surgeon*, to be Major and Surgeon, February 22, 1891.

WILCOX, TIMOTHY E., *Captain and Assistant Surgeon*, to be Major and Surgeon, February 24, 1891.

AINSWORTH, FREDERICK C., *Captain and Assistant Surgeon*, to be Major and Surgeon, February 27, 1891.

HOWARD, VALERY, *Captain and Assistant Surgeon*, to be Major and Surgeon, February 27, 1891.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MARCH 14, 1891.

KITE, G. W., *Passed Assistant Surgeon.*—Detached from New York Hospital, and ordered to the "Lancaster."

NORTH, J. H., JR., *Assistant Surgeon.*—Detached from the "Lancaster," and wait orders.

SMITH, G. T., *Assistant Surgeon.*—Detached from the "Independence," and ordered to the "Mohican."

LUNG, GEORGE A., *Assistant Surgeon.*—Detached from the "Mohican," and ordered to Washington, D. C., in charge of insane patients.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING MARCH 14, 1891.

LONG, W. H., *Surgeon.*—Granted leave of absence for seven days, March 13, 1891.

AUSTIN, H. W., *Surgeon.*—To proceed to Baltimore, Md., for special duty, March 14, 1891.

GODFREY, JOHN, *Surgeon.*—Detailed as Chairman of Board for Physical Examination of Officer of Revenue-Marine Service, March 4, 1891.

BANKS, C. E., *Passed Assistant Surgeon.*—To proceed to Boston, Mass., on special duty, March 7, 1891.

PERRY, T. B., *Assistant Surgeon.*—Leave of absence extended thirty days, March 13, 1891.

HOUGHTON, E. R., *Assistant Surgeon.*—Detailed as Recorder of Board for Physical Examination of Officer of Revenue-Marine Service, March 4, 1891.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication, or 250 reprints will be furnished instead of payment, provided request for reprints be noted by author at top of manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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